TECHNICAL SPECIFICATIONS

The Northern Indiana Commuter Transportation District (NICTD) is seeking sealed bids from qualified firms for one (1) prewired and tested highway-rail grade crossing warning system control house. Case shall include structure and shall be constructed and wired complete per the following NICTD drawings:

PTMW	Sheets 1 through 13 8 x 8 Steel House
SS05721	Sheets 1 through 21 Taylor Road, M.P. 5721

PTMW Drawings are for a standard constructed 8 x 8 steel house. Use these drawings for the basis of the signal house. Be sure to refer to the SSO Drawings for the specific details to be included as part of this signal house, such as shelving locations, outlet locations, etc.

All material and construction practices shall be in compliance with all current applicable recommendations of the AREMA Communications and Signals Section Signal Manual. Material must also meet all current applicable rules, standards, and instructions of the U.S. D.O.T. Federal Railroad Administration. Firms must have a minimum of five years demonstrated experience in the supply of prewired block signal and highway-rail grade crossing warning system control cases.

8 X 8 STEEL HOUSE
NICTD

SHEET	DESCRIPTION
1 OF 13	COVER PAGE AND REVISION HISTORY
2 OF 13	GENERAL NOTES OF MATERIALS AND PROCEDURES
3 OF 13	GENERAL NOTES OF MATERIALS AND PROCEDURES
4 OF 13	EXTERIOR VIEW OF D WALL
5 OF 13	EXTERIOR VIEW OF A WALL
6 OF 13	EXTERIOR VIEW OF B WALL
7 OF 13	EXTERIOR VIEW OF C WALL
8 OF 13	PLAN VIEW OF ENCLOSURE
9 OF 13	INTERIOR VIEW OF D WALL
10 OF 13	INTERIOR VIEW OF A WALL
11 OF 13	INTERIOR VIEW OF B WALL
12 OF 13	INTERIOR VIEW OF C WALL
13 OF 13	ELECTRICAL SCHEMATIC

DATE	REV	SHEETS	DESCRIPTION	DRAWN
04/27/04	A	ALL	ORIGINAL RELEASE.	DLS
06/21/04	B	ALL	PER CUSTOMER REQUEST.	DLS
06/28/04	C	ALL	A & C WALLS ARE TO RECEIVE WOOD BETWEEN THE KEYWAYS.	DLS
06/29/04	D	ALL	ADD POWER OFF LIGHTS.	DLS
07/21/04	E	ALL	REMOVE DOOR VENT SCREEN, REEL LIGHT AND FIRE EXTINGUISHER, ADD COLD WEATHER BALLAST, GROUND ROD QUANTITY WAS 8, RAISE C WALL RECEPTACLE.	SES
09/30/04	F	ALL	REVISE SHIP LOOSE, REMOVE SHELVES, REV WIRE CHASE.	DLS
01/26/05	G	2,7,8,9,10,&11	REVISED WIRE CHASE, ADDED SHELF TO SHIP LOOSE, REMOVED FOLD DOWN TABLE AND BATTERY TRAY.	JM
03/03/05	H	2,7,8,9,11,&12	REVISED WIRE CHASE, RELOCATED THERMAL DETECTOR. REVISED ELECTRICAL GROUNDING.	JM
11/07/05	J	ALL	ADDED 9E, REVISED 14, 15, 37, ELECTRICAL SCHEMATIC.	JM
02/03/06	K	2	REVISED NOTE 37 AND ADDED 38.	VLS
11/25/09	L	ALL	UPDATED TO CURRENT PRODUCTION STANDARDS.	ARL
02/22/10	L	2,3	CORRECTED NOTE FOR PAINT ON TERMINAL BOARD.	ARL

PTMW INC. CANNOT PROCEED WITH PRODUCTION OF THIS PROJECT UNTIL A SIGNED COPY OF THIS SHEET IS RETURNED.

☐ APPROVED

☐ DENIED

APPROVED BY: _____

DATE: _____

PTMW Inc.

OEM METAL FABRICATION & ASSEMBLY

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8 X 8 STEEL HOUSE
NICTD

55677 L SHEET 1 OF 13

GENERAL NOTES OF MATERIALS AND PROCEDURES

EXTERIOR FEATURES

S1. Enclosure floor, walls, and doors constructed of 12 Ga. galvannealed steel (ASTM A525). Roof constructed of 14 Ga. galvannealed steel (ASTM A525).

S2. Enclosure equipped with inner wall type foundations constructed of galvanized steel minimum 60" long with 12" square footing plate and adjustable from 36" to 52" in 1" increments.

S3. Exterior finished with 3–4 MIL. gray polyester powder coat. Bottom side of floor finished with 3–4 MIL. gray polyester powder coat.

S4. All exterior seams caulked with gray 50 year RTV silicone.

S5. Manufacturer's name plate with serial number located outside above the front door.

S6. Enclosure equipped with 3/8" X 6" X 12" aluminum (3003) lifting lugs located as shown.

S7. Four grounding pigtails located below the floor.

S8. Aerial cable entries provided as shown.

DOORS

D WALL – door size 32" x 87"; door opening 30" x 85";

D1. Vandal resistant bolt on stainless steel hinges with grease fittings and stainless steel pins.

D2. Heavy duty three point locking system with interior safety override handle and exterior handle with 5/8" diameter padlock hole.

D3. Door constructed of exterior and interior metal skin with 2" (R12) of recover board insulation between.

D4. Zinc plated prop rod to hold door open at 90° and 160°.

D5. EPDM extruded rubber gasket providing a weather tight seal.

D6. Threshold with anti–skid tape

B WALL – door size 40" x 87"; door opening 38" x 85";

B1. Vandal resistant bolt on stainless steel hinges with grease fittings and stainless steel pins.

B2. Heavy duty three point locking system with exterior handle with 5/8" diameter padlock hole. (NO INTERIOR HANDLE ON THIS DOOR)

B3. Door constructed of exterior and interior metal skin with 2" (R12) of recover board insulation between.

B4. Zinc plated prop rod to hold door open at 90° and 160°.

B5. EPDM extruded rubber gasket providing a weather tight seal.

INTERIOR FEATURES

W1. FLOOR features; R value = 3.5:

A. Provision for one 6.00 X 36.00 cable chute with shipping cover plate. One ø2–3/8 power entry hole.

B. Floor covered with 1/2" (R2.5) rigid insulation and 3/4" (R1) OSB plywood with 1/4" rubber matting.

W2. D WALL features; R value = 11:

A. Wall panels are skip welded to the floor.

B. 2" rigid insulation covered with 3/4" class C white laminated 7–ply plywood between the keyways.

W3. A WALL features; R value = 11:

A. Wall panels are skip welded to the floor.

B. 2" rigid insulation covered with 3/4" class C white laminated 7–ply plywood between the keyways.

W4. B WALL features; R value = 11:

A. Wall panel are skip welded to the floor.

B. 2" rigid insulation covered with 3/4" class C white laminated 7–ply plywood between the keyways.

W5. C WALL features; R value = 11:

A. Wall panels are skip welded to the floor.

B. 2" rigid insulation covered with 3/4" class C white laminated 7–ply plywood between the keyways.

W6. CEILING features; R value = 11:

A. 2" rigid insulation between trusses with 1/2" class C white laminated 5–ply plywood under the trusses.

W7. Terminal board to include the following:

A. Terminal board constructed of 3/4" 2–sided MDO plywood, finished with white fire retardant paint and mounted in a frame constructed of 12 Ga. galvannealed steel (ASTM A525).

B. Two relay mounting bars & one ladder bar for securing cables.

W8. Shelf brackets and other miscellaneous hardware items finished with white polyester powder coat or zinc plated clear chromate finish.

W9. Wire chase is a purchased modular style constructed of aluminum.

FIRE/SECURITY SYSTEM

F1. One control panel.

F2. One output module.

F3. One ionization detector.

F4. One thermal detector.

F5. One 12V battery

F6. One horn.

F7. One power supply (internal).

F8. One lock with key.

F9. One keypad.

F10. One battery box.

F11. Two Magnetic doors switches.

PTMW Inc.

OEM METAL FABRICATION & ASSEMBLY

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8 X 8 STEEL HOUSE
NICTD

GENERAL NOTES OF MATERIALS AND PROCEDURES

HVAC

V1. Intake and exhaust vents located at gable ends of roof with moisture resistant polyester fiber, snap in filters.

V2. Two 120V, 273 CFM centrifugal ventilation fans (Grainger# 1TDR3).

V3. Two Dayton 30° to 110° F thermostats (Grainger# 1UHH4).

V4. One 1500 watt, 110 volt, 60 Hz, 5118 Btu heater (Cadet #CC151TW).

ELECTRICAL

All supplied electrical components to be UL listed. All power circuits to be run in conduit and secured to enclosure structure. Electrical system to included the following items installed by manufacturer:

E1. One 100A, 12 space breaker box and cover (Square D # QO112M100 & QOC12US).

E2. One 20 amp single pole GFI breaker (Square D# QO120GFI).

E3. Four 15 amp breaker (Square D# QO115).

E4. One 15A light switch.

E5. Three 20A duplex receptacles.

E6. Two 4' rapid start fluorescent light fixtures with T-8 lamps, shatter guards and tube locks.

E7. Two power off lights (Gems # IL-LC3).

E8. One 12" x 12" x 6" junction box with Lexan cover.

E9. Five feet of 2" EMT conduit for power entry.

SHIP LOOSE ITEMS

The following items will be shipped loose with enclosure:

L1. Two feet of 2" EMT conduit

L2. One 2" plastic bushing.

L3. One 2" D/C EMT compression connector.

L4. One 2" compression connector.

L5. One quart of white fire retardant paint with MSDS sheet.

L6. One 60" Shelf constructed of 3/4" black HDPE laminated plywood (no pre-drilled mounting holes) and front edge finished with black PVC shelf trim. Mounting brackets and hardware boxed separately and installed by others.

L7. One 6.00 X 36.00 cable chute.

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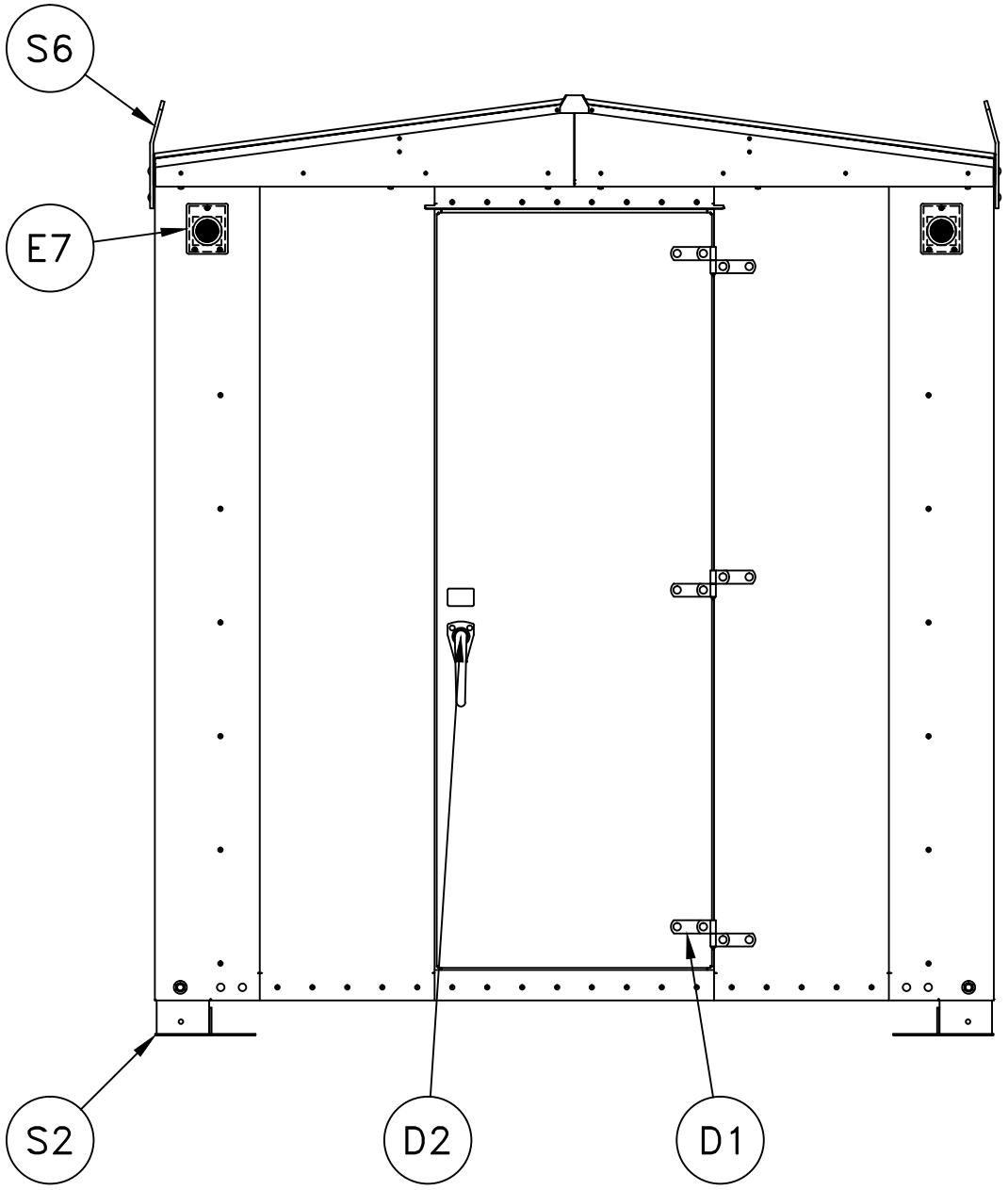
8 X 8 STEEL HOUSE
NICTD



EXTERIOR VIEW OF D WALL

PTMW Inc.

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8 X 8 STEEL HOUSE
NICTD

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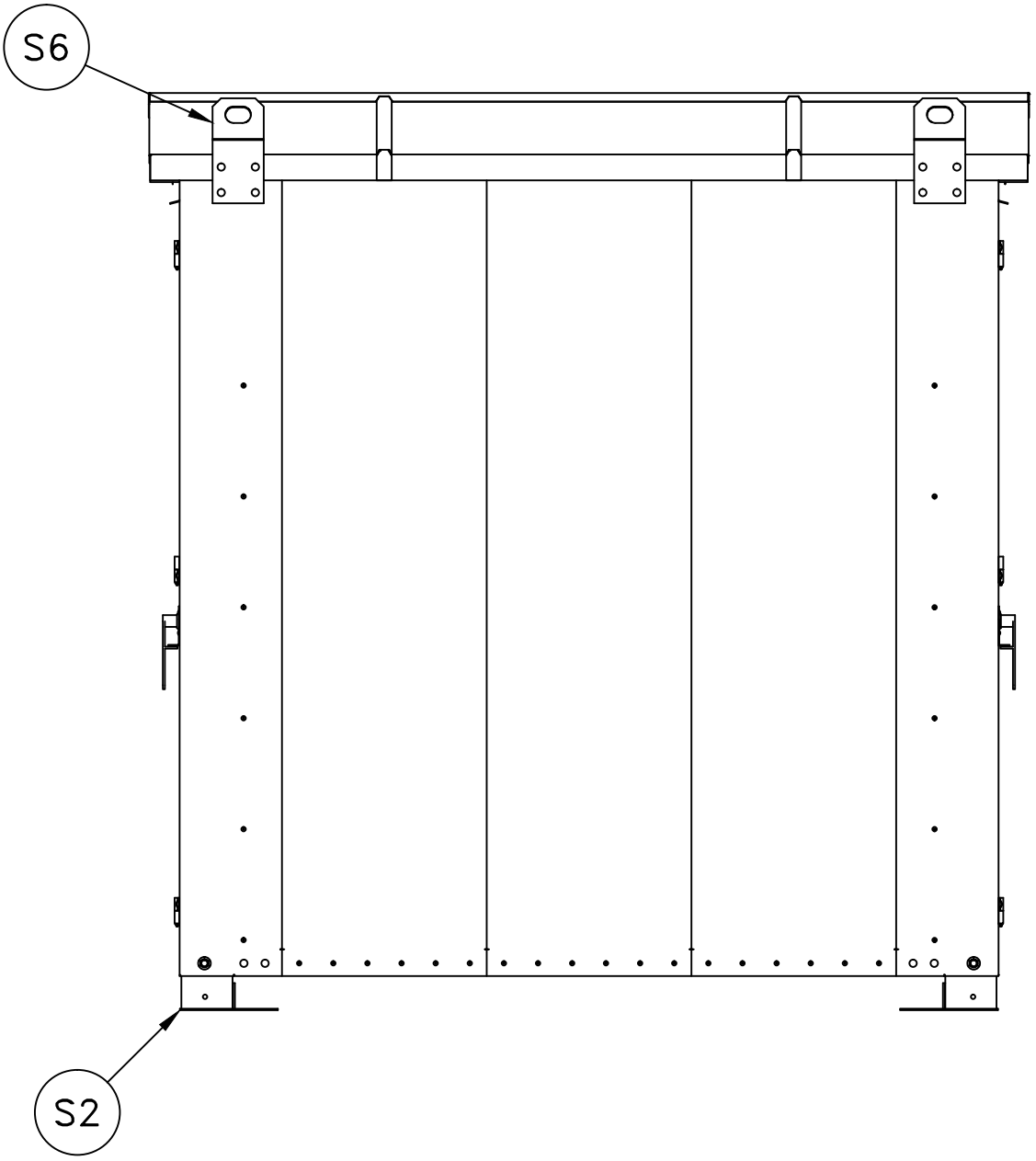

EXTERIOR VIEW OF A WALL

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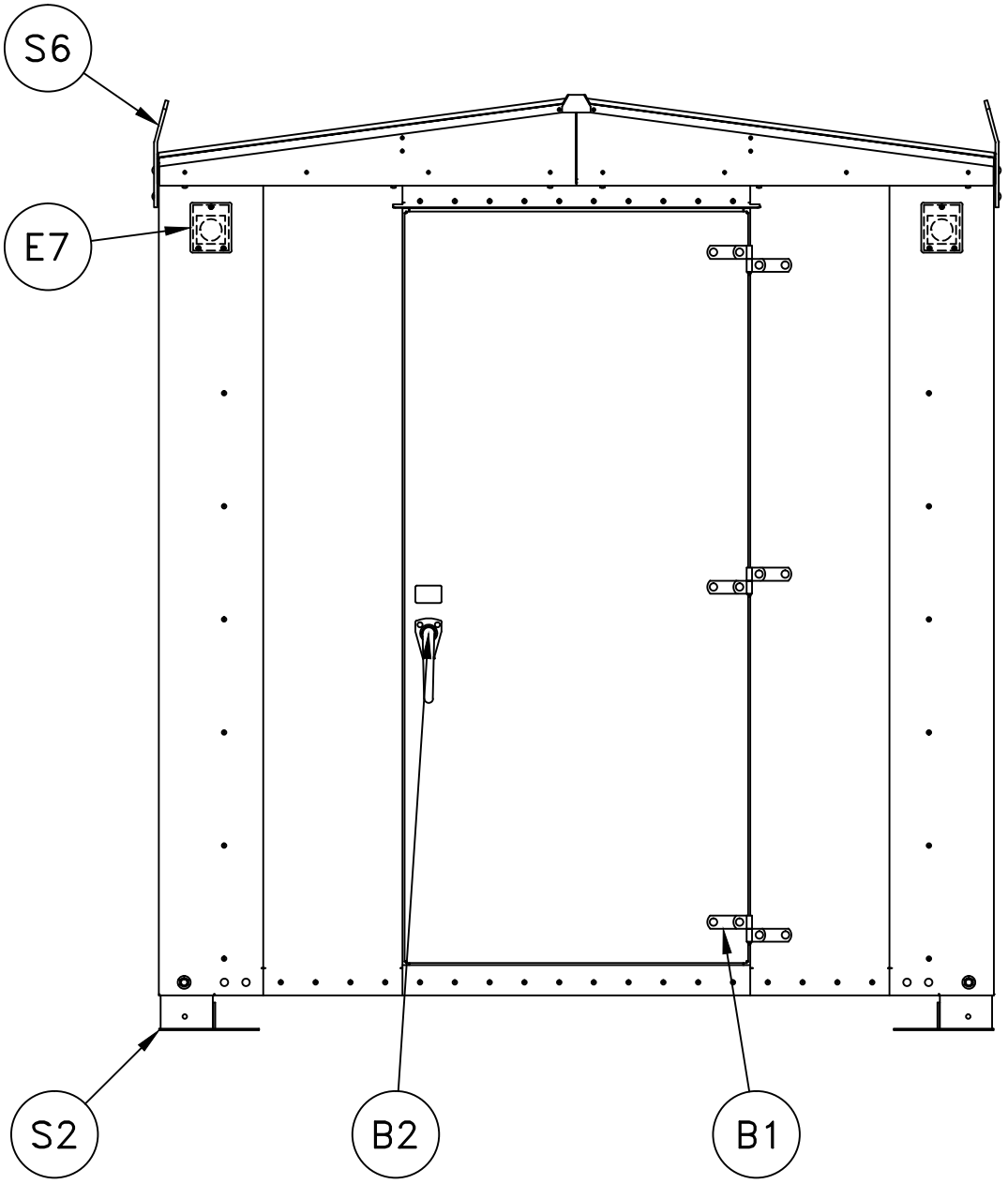

EXTERIOR VIEW OF B WALL

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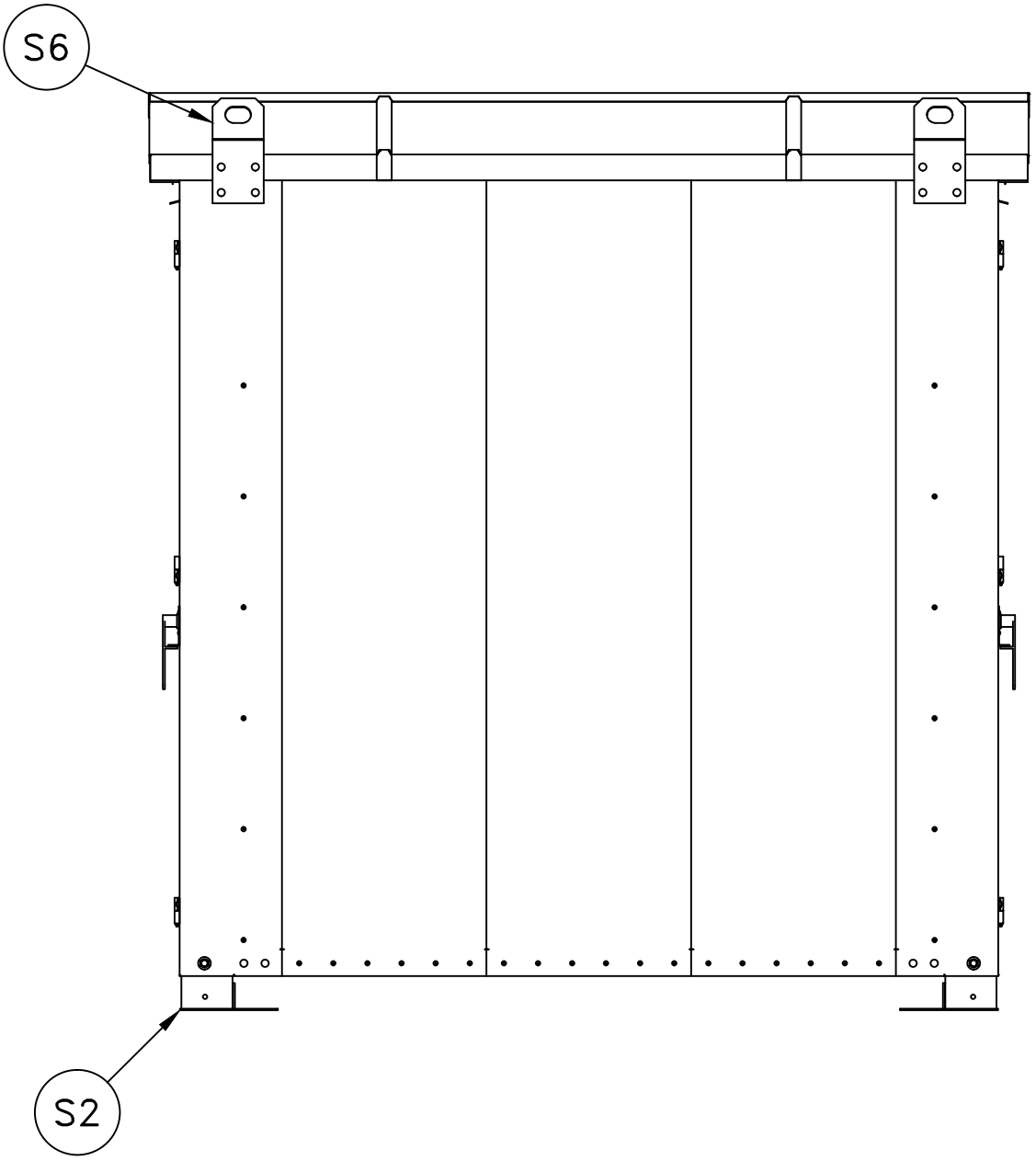

EXTERIOR VIEW OF C WALL

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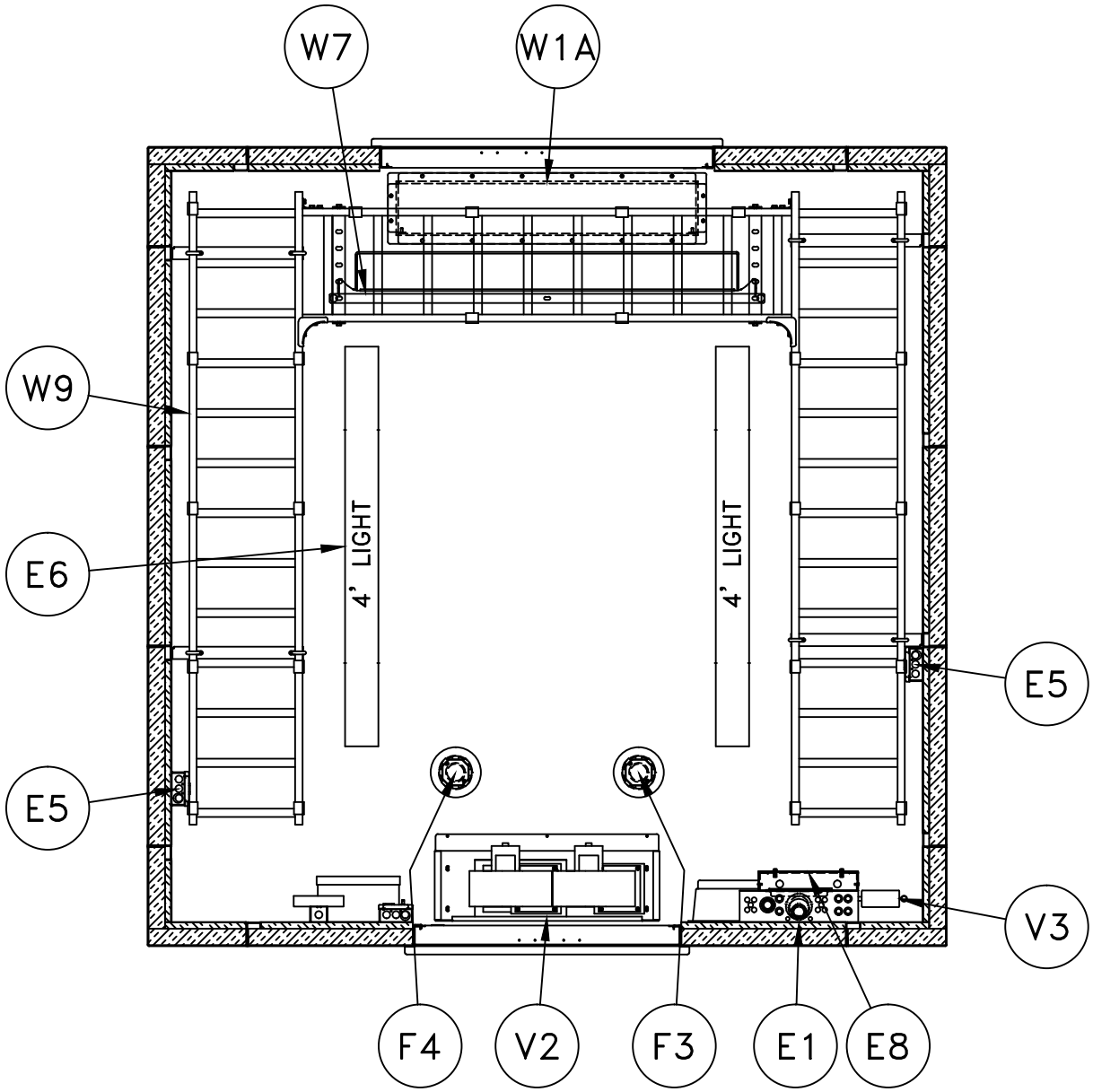
B WALL



A WALL

C WALL

D WALL

PLAN VIEW OF ENCLOSURE

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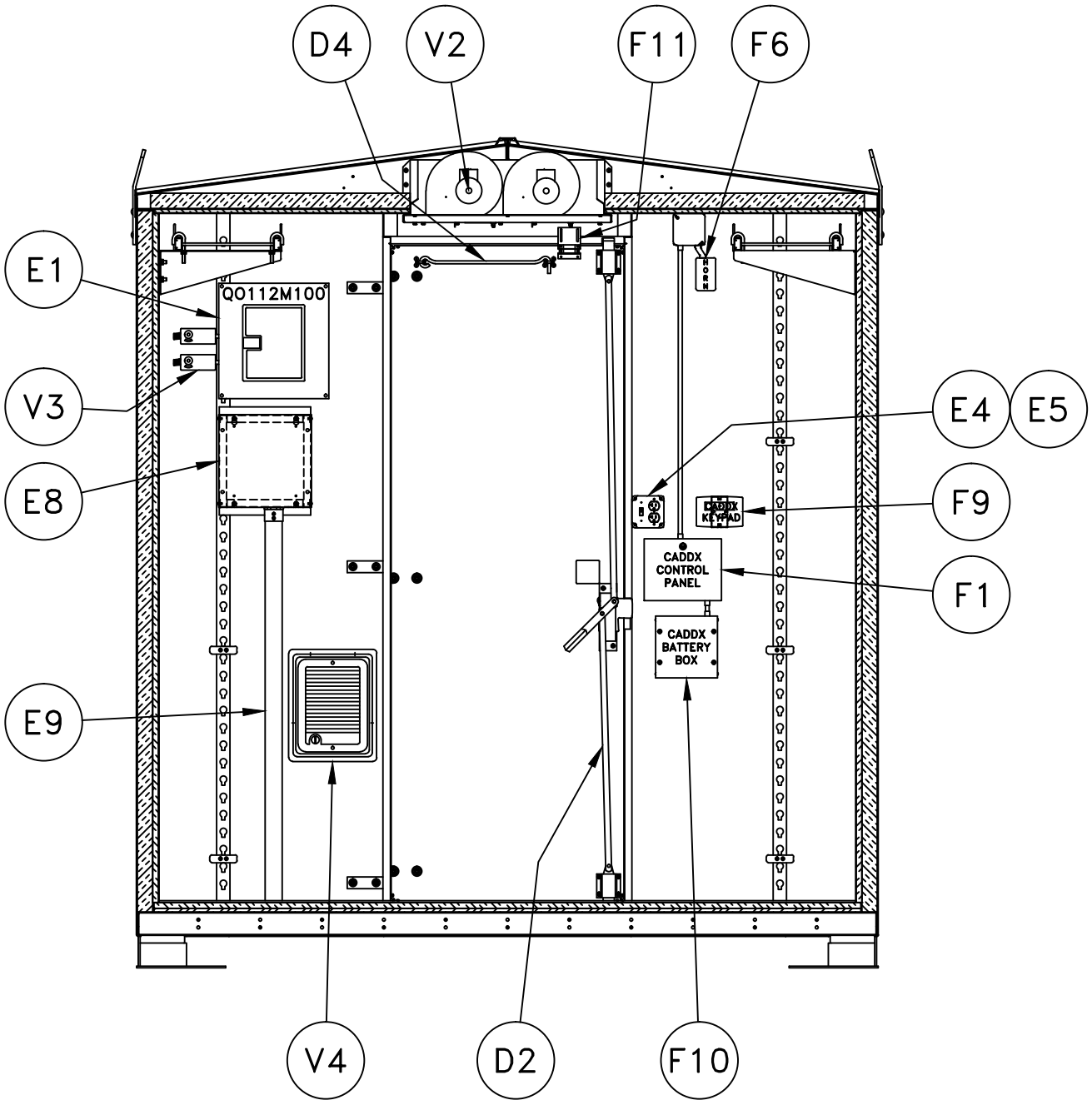

INTERIOR VIEW OF D WALL

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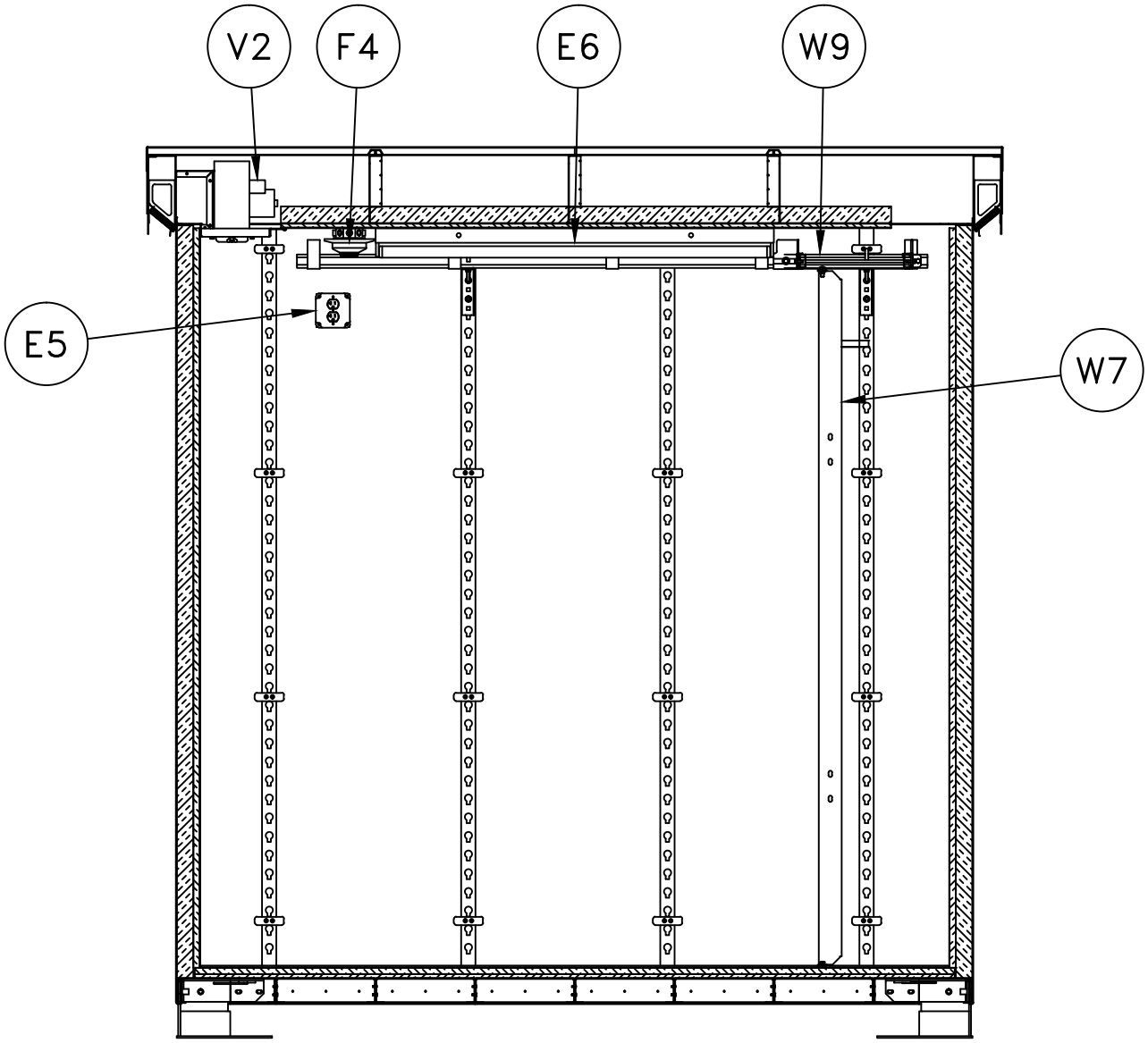

INTERIOR VIEW OF A WALL

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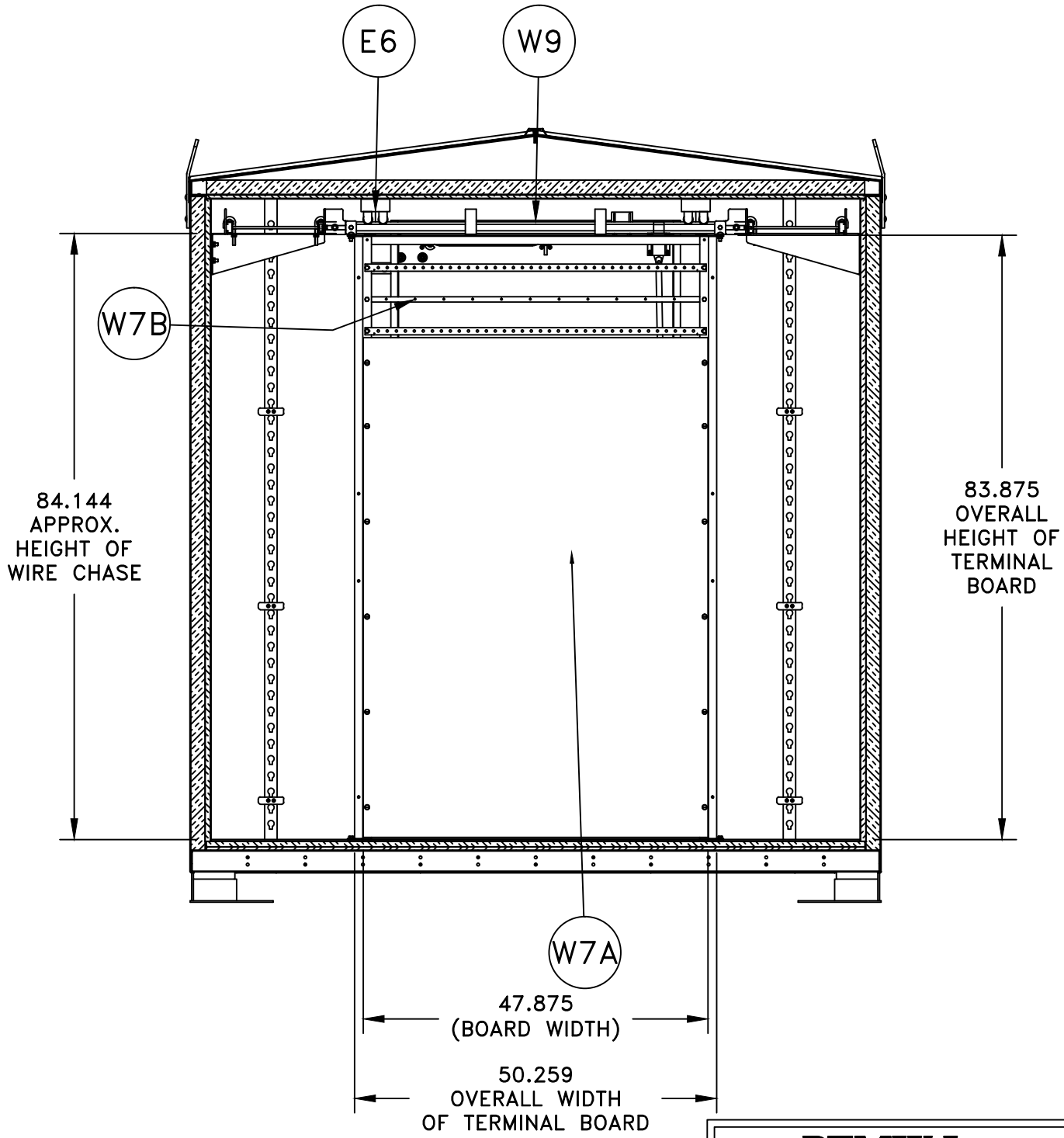

INTERIOR VIEW OF B WALL

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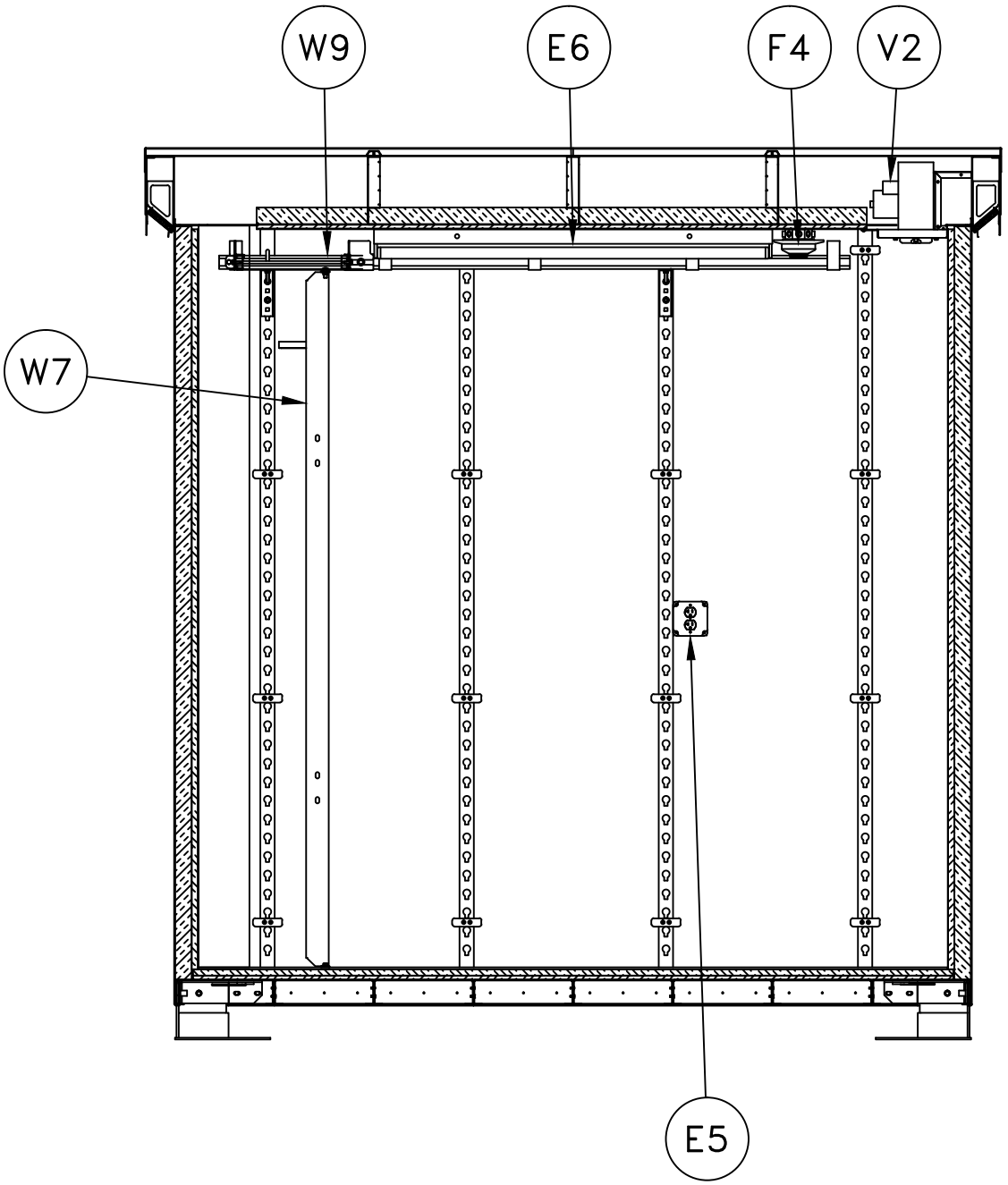

INTERIOR VIEW OF C WALL

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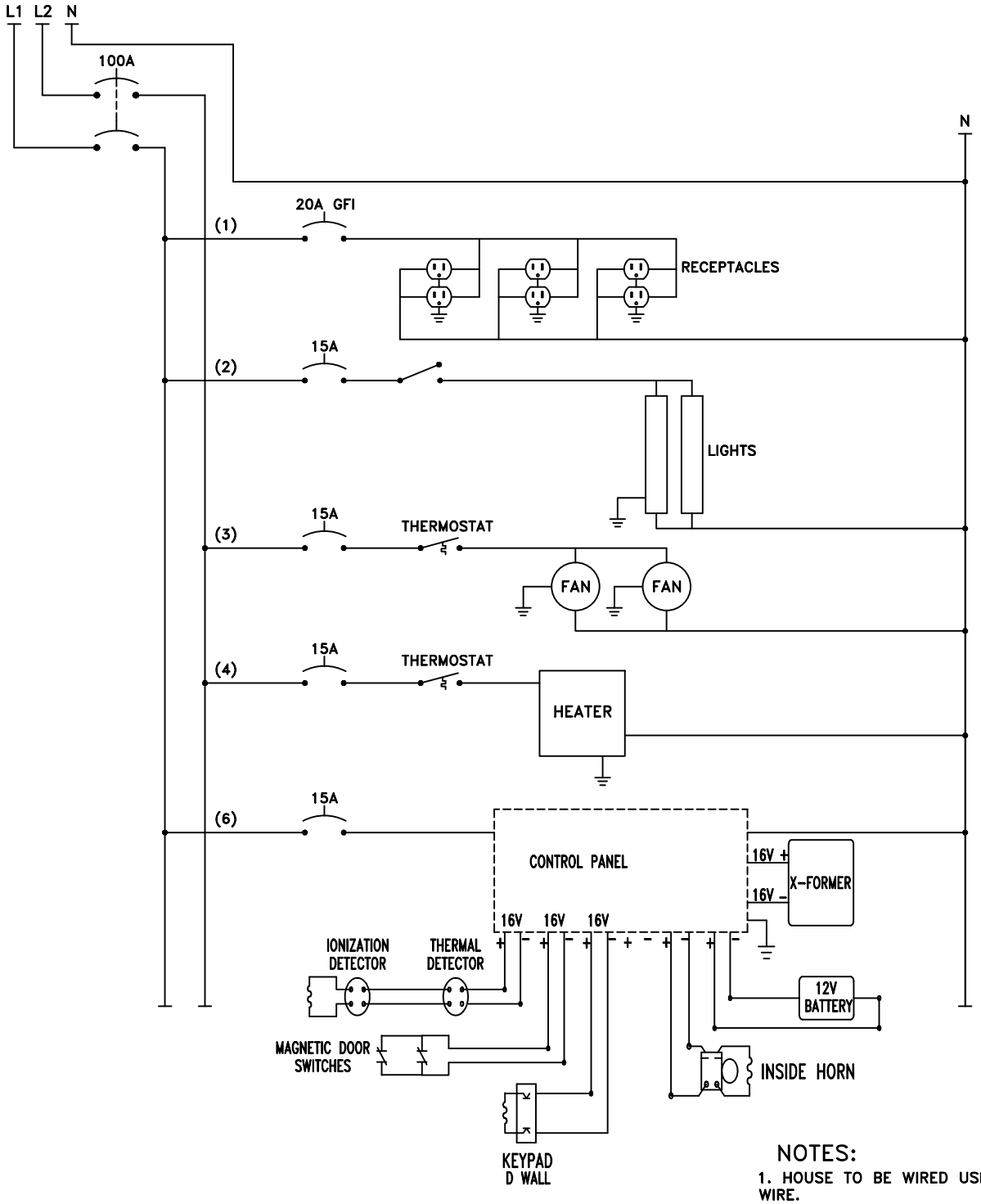

NOTES:

1. HOUSE TO BE WIRED USING 12 GA. STRANDED WIRE.
2. ALL EQUIPMENT INSTALLED BY PTMW TO BE GROUNDED.

HOUSE RECEPTACLES	1 20A GFI	2 15A	LIGHTS
FAN	3 15A	4 15A	HEATER
NOT USED	5	6 15A	SECURITY SYSTEM
NOT USED	7	8	NOT USED
NOT USED	9	10	NOT USED
NOT USED	11	12	NOT USED

ELECTRICAL LAYOUT

PTMW Inc.

OEM METAL FABRICATION & ASSEMBLY

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8 X 8 STEEL HOUSE
NICTD

55677 L

NORTHERN INDIANA COMMUTER TRANSPORTATION DISTRICT

TAYLOR ROAD
DOT# 870 882V
MP. 57.21

FOR BIDDING PURPOSES

Southwest
Signal Engineering Co.

7235 Bonneval Road - Jacksonville Florida 32256

Northern Indiana Commuter Transportation District			
NICTD	601 NORTH ROESKE AVENUE MICHIGAN CITY, INDIANA 46360-2669		
Location	MP. 57.21 TAYLOR ROAD		
Description	COVER PAGE		
Designed By	DCJ	Document Number	SS05721
Drawn By	DCJ		
Approved By	VRB / DCJ	Rev. / Date	05-04-15

INDEX		REVISION									
SHEET	DESCRIPTION	1	2	3	4	5	6	7	8	9	10
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2	CROSSING LAYOUT										
3	INSTALLATION LOCATION PLAN										
4	OVERLAY CIRCUITS										
5	CONTROLLER - SOUTHEAST GATE & ALL SOUTH FACING FLASHERS										
6	CONTROLLER - NORTHWEST GATE & ALL NORTH FACING FLASHERS										
7	SURGE PANEL - SOUTHEAST GATE & ALL SOUTH FACING FLASHERS										
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19	INTERIOR HOUSE LAYOUT - "D" WALL										
20	HOUSE APPARATUS BOARD "B" FRONT VIEW										
21	HOUSE APPARATUS BOARD "B" REAR VIEW										

DRAWN NEW PER NICTD SIGNAL REHABILITATION PROJECT.

ISSUE DATE: 08-10-06
IN SERVICE: 11-15-07
PER: VRB

COMPLETE NEW HOUSE AND EQUIPMENT REPLACEMENT.

ISSUE DATE: ??-??-15
IN SERVICE:
PER: ???

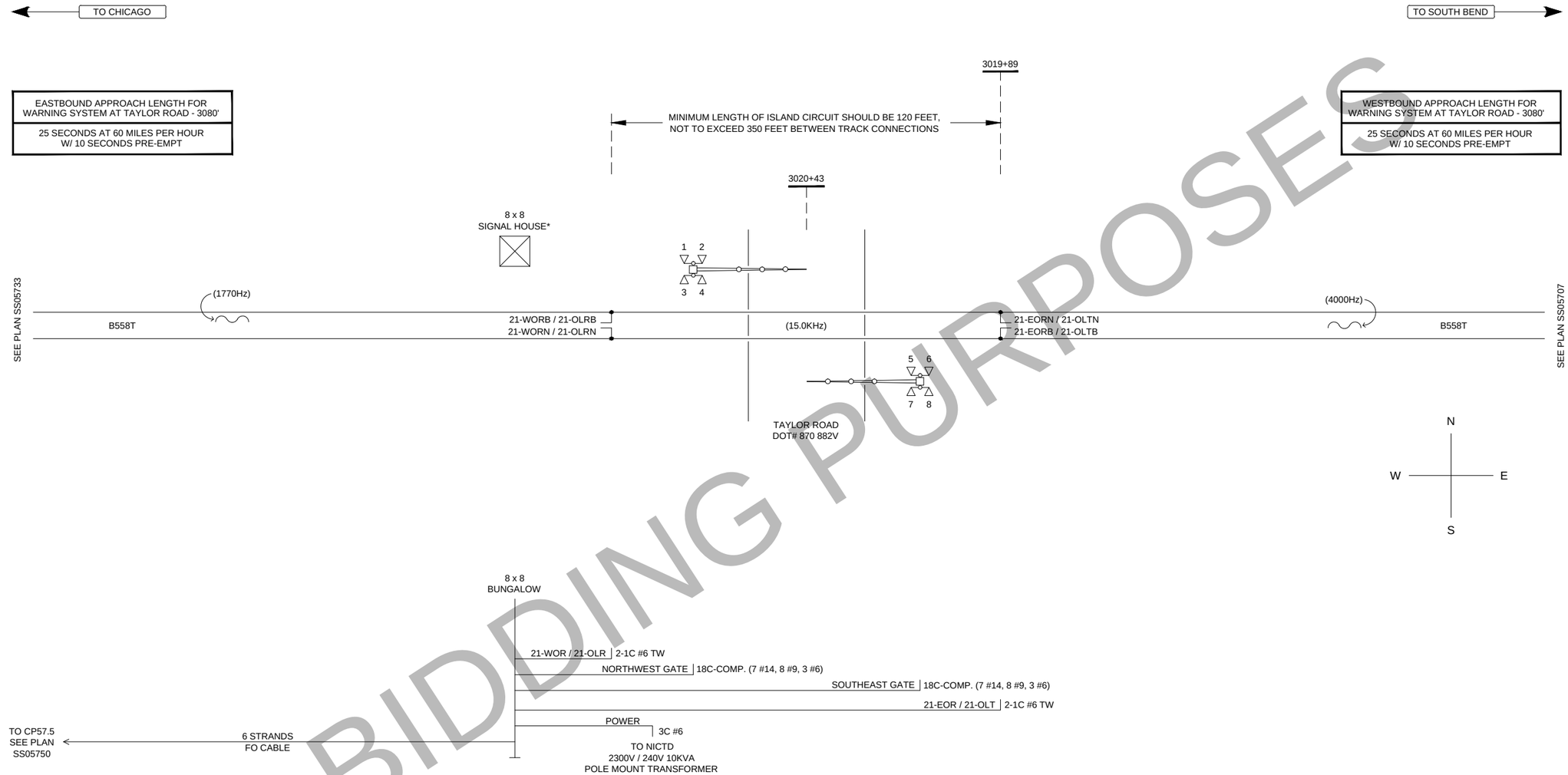
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	INDEX SHEET		
Designed By	DCJ	Document Number	SS05721.01
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	1 of 21


TO CHICAGO
TO SOUTH BEND
EASTBOUND APPROACH LENGTH FOR WARNING SYSTEM AT TAYLOR ROAD - 3080'
25 SECONDS AT 60 MILES PER HOUR W/ 10 SECONDS PRE-EMPT
WESTBOUND APPROACH LENGTH FOR WARNING SYSTEM AT TAYLOR ROAD - 3080'
25 SECONDS AT 60 MILES PER HOUR W/ 10 SECONDS PRE-EMPT
3019+89
MINIMUM LENGTH OF ISLAND CIRCUIT SHOULD BE 120 FEET, NOT TO EXCEED 350 FEET BETWEEN TRACK CONNECTIONS
3020+43
8 x 8 SIGNAL HOUSE*
1 2 3 4
SEE PLAN SS05733
(1770Hz)
B558T
21-WORB / 21-OLRB
21-WORN / 21-OLRN
(15.0KHz)
21-EORN / 21-OLTN
21-EORB / 21-OLTB
(4000Hz)
B558T
SEE PLAN SS05707
5 6 7 8
TAYLOR ROAD
DOT# 870 882V
N
W
E
S
8 x 8 BUNGALOW
21-WOR / 21-OLR | 2-1C #6 TW
NORTHWEST GATE | 18C-COMP. (7 #14, 8 #9, 3 #6)
SOUTHEAST GATE | 18C-COMP. (7 #14, 8 #9, 3 #6)
21-EOR / 21-OLT | 2-1C #6 TW
POWER | 3C #6
TO CP57.5 SEE PLAN SS05750
6 STRANDS FO CABLE
TO NICTD 2300V / 240V 10KVA POLE MOUNT TRANSFORMER

FOR BIDDING PURPOSES

* SIGNAL HOUSE SHALL BE PER PTMW

Northern Indiana Commuter Transportation District

NICTD

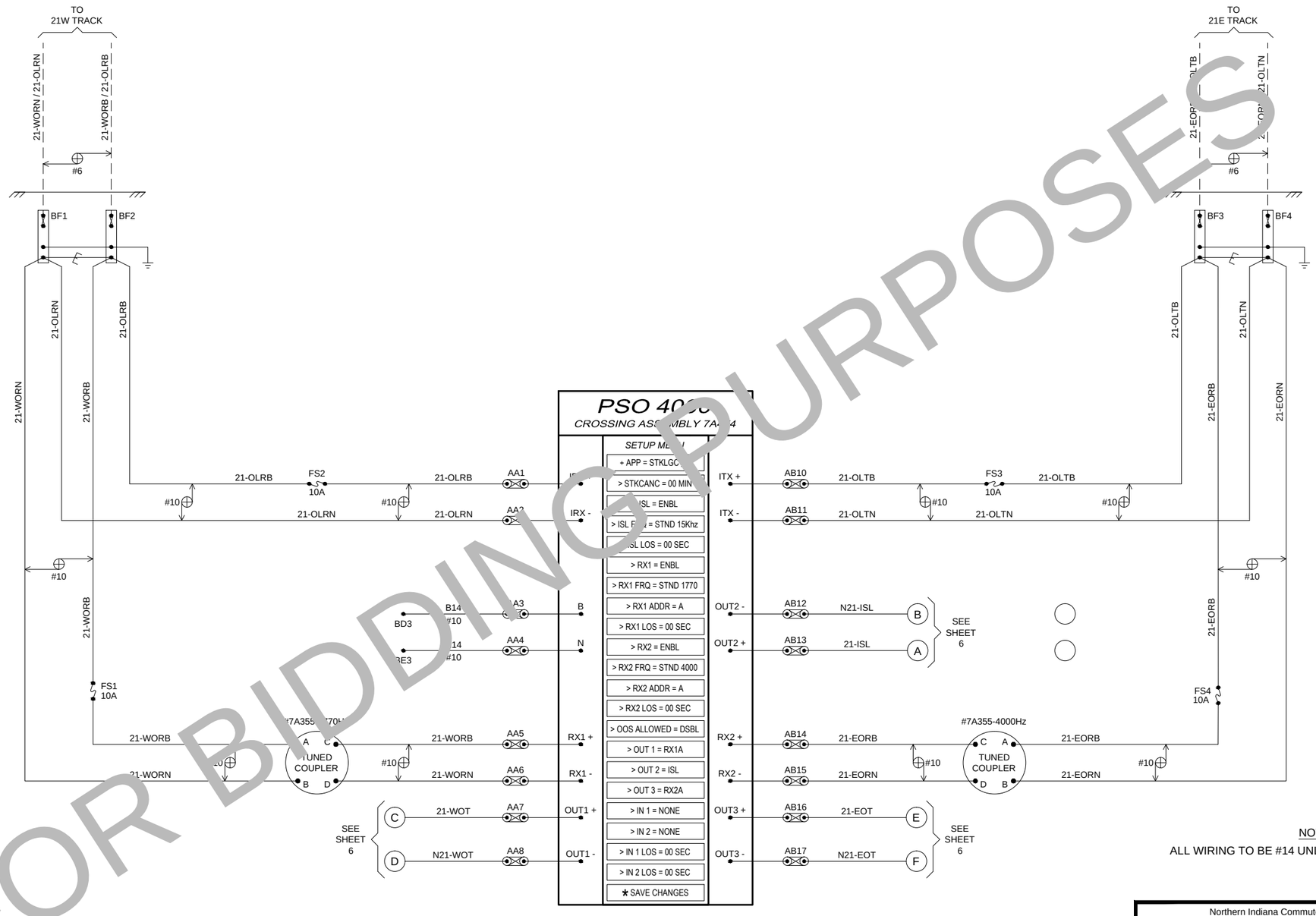
601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD			
Description	CROSSING LAYOUT			
Designed By	DCJ	Document Number	SS05721.02	
Drawn By	DCJ	Rev.	Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	2 of	21

FOR BIDDING PURPOSES

SHEET INTENTIONALLY LEFT BLANK

Northern Indiana Commuter Transportation District				
NICTD	601 NORTH ROESKE AVENUE MICHIGAN CITY, INDIANA 46360-2669			
Location	MP. 57.21 TAYLOR ROAD			
Description	INSTALLATION LOCATION PLAN			
Designed By		Document Number	SS05721.03	
Drawn By	DCJ	Rev.	Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	3 of 21	



NOTE

ALL WIRING TO BE #14 UNLESS OTHERWISE NOTED

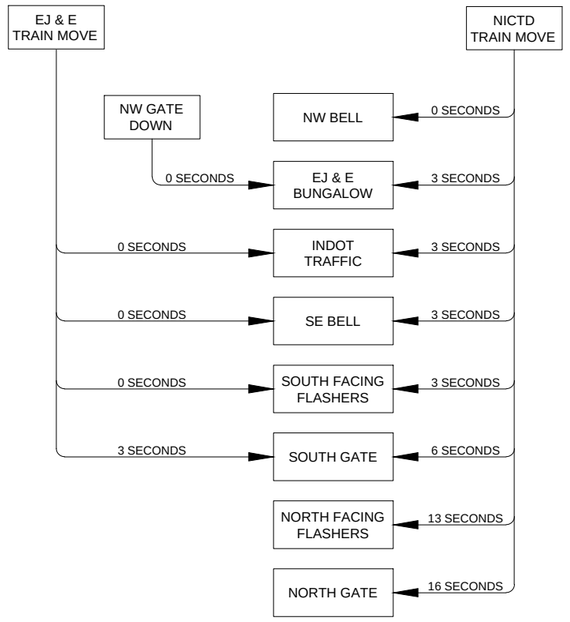
FOR BIDDING PURPOSES

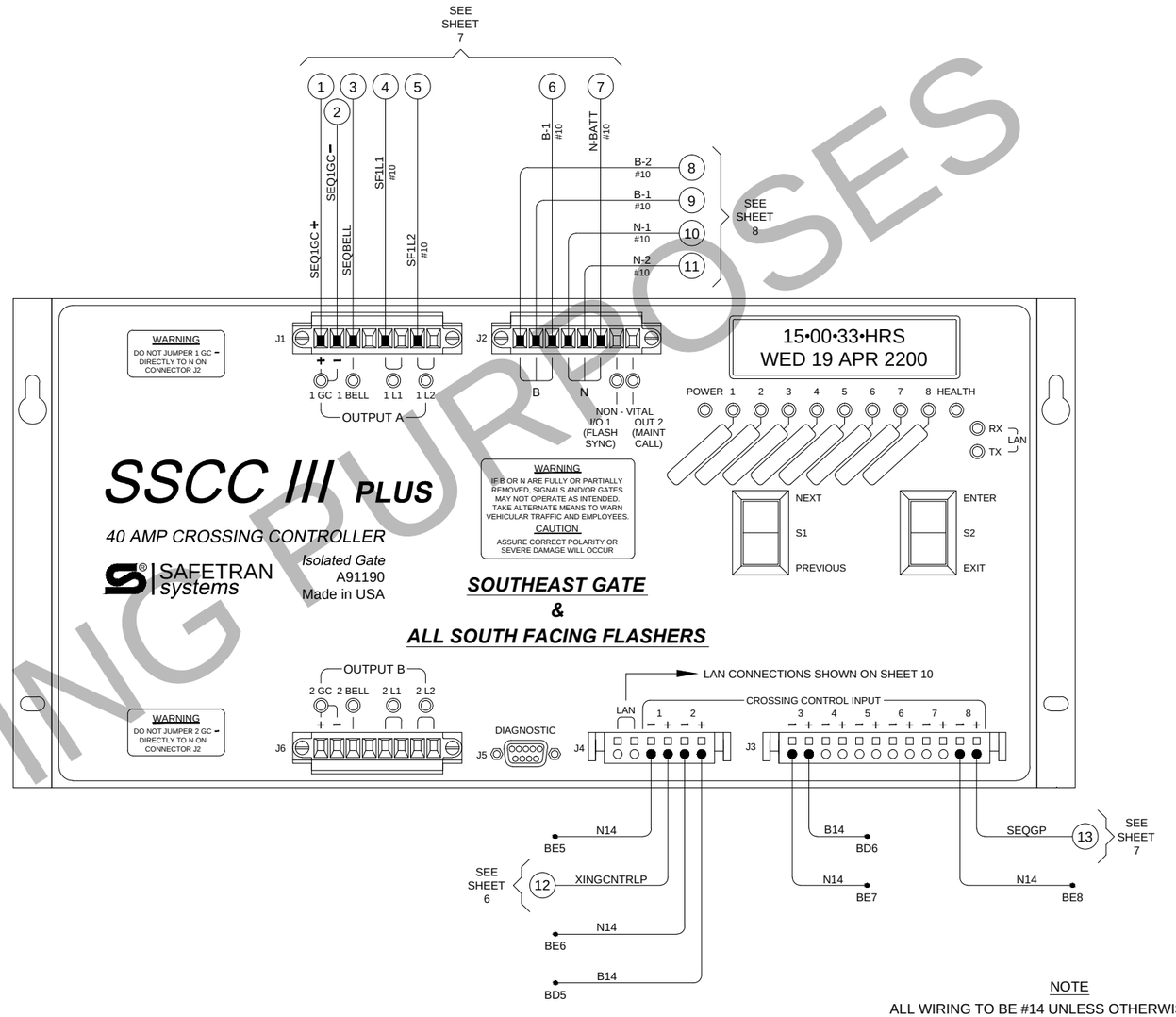
Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	OVERLAY CIRCUITS		
Designed By	DCJ	Document Number	SS05721.04
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	4 of 21





SOUTHEAST QUADRANT

CONFIGURE MENU

- CFG INPUT 1 LOS TMR: 5 SEC.
- CFG INPUT 2 LOS TMR: 10 SEC.
- CFG INPUT 3 LOS TMR: 5 SEC.
- CGF :Y 2TRKDSTK.MCF.B
- CFG ATCS ADDRESS 7.168.006.012.01.02
- CFG LOW BATTERY 12.0 VOLTS
- CFG AUX I/O NONVITAL OUTPUT
- CFG DETECT LAMP NEUTRAL WIRE: YES

PROGRAM MENU

- PRG FLASH RATE: 50 PER MIN
- PRG INPUT 7 DISABLED
- PRG GATES USED YES
- PRG STK RELEASE TMR: 5 MIN.
- PRG 1GC DELAY TMR: 3 SEC.
- PRG ENABLED OUTPUT A
- PRG 2GC DELAY TMR: 3 SEC.
- PRG TIME
- PRG GATE RISING BEL: OFF
- PRG DATE
- PRG 2GC / I7 MODE NORMAL
- PRG DAYLIGHT SAVING: ENABLED
- PRG MIN ACTIVATE TMR: 25 SEC.
- PRG PASSWORD: DISABLED
- PRG INPUT 4, 5, 6 DISABLED

NOTE

ALL WIRING TO BE #14 UNLESS OTHERWISE NOTED

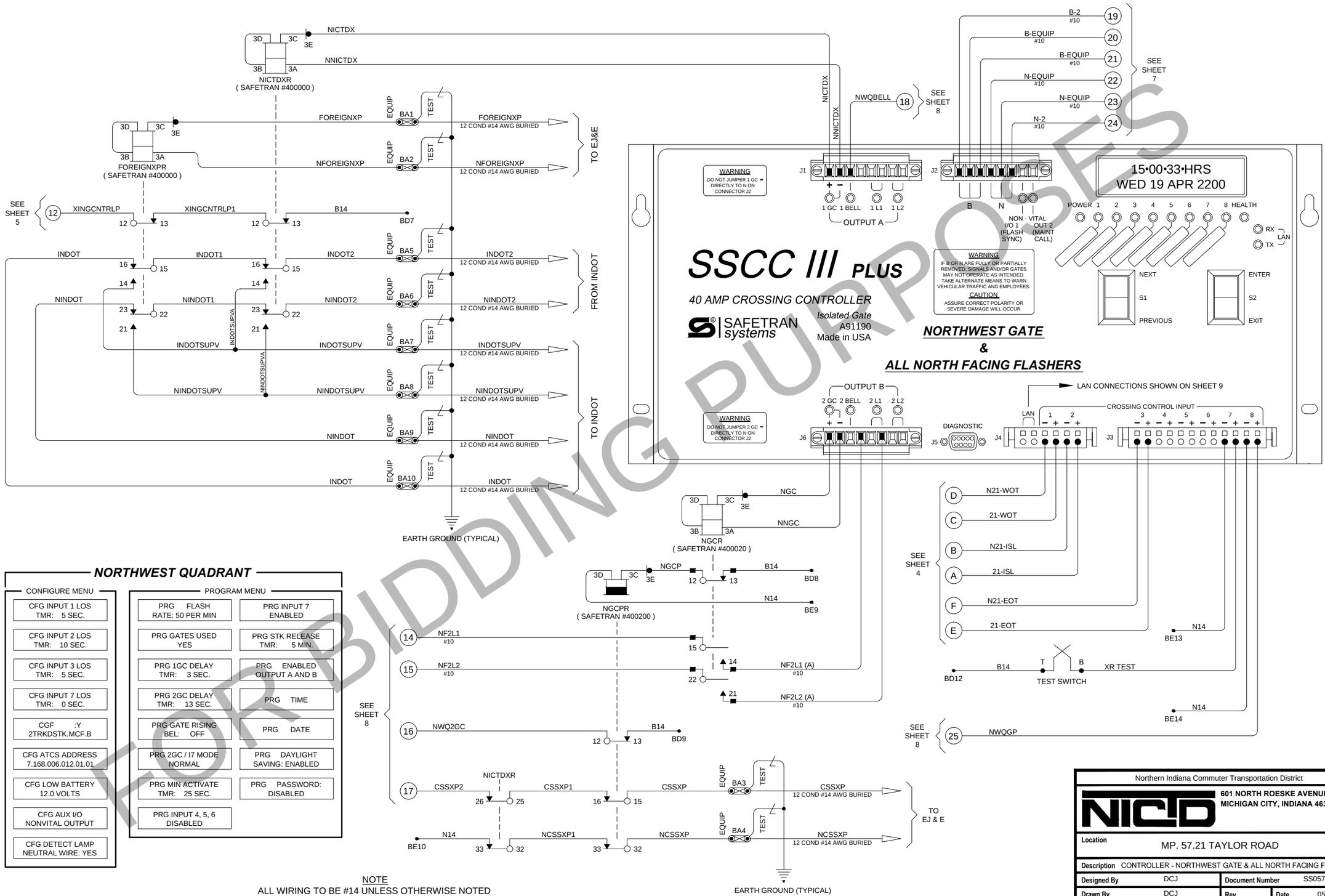
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD			
Description	CONTROLLER - SOUTHEAST GATE & ALL SOUTH FACING FLASHERS			
Designed By	DCJ	Document Number	SS05721.05	
Drawn By	DCJ	Rev.	Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	5 of 21	



NORTHWEST QUADRANT

CONFIGURE MENU

- CFG INPUT 1 LOS TMR: 5 SEC.
- CFG INPUT 2 LOS TMR: 10 SEC.
- CFG INPUT 3 LOS TMR: 5 SEC.
- CFG INPUT 7 LOS TMR: 0 SEC.
- CGF :Y 2TRKDSTK.MCF.B
- CFG ATCS ADDRESS 7.168.006.012.01.01
- CFG LOW BATTERY 12.0 VOLTS
- CFG AUX I/O NONVITAL OUTPUT
- CFG DETECT LAMP NEUTRAL WIRE: YES

PROGRAM MENU

- PRG FLASH RATE: 50 PER MIN
- PRG INPUT 7 ENABLED
- PRG GATES USED YES
- PRG STK RELEASE TMR: 5 MIN.
- PRG 1GC DELAY TMR: 3 SEC.
- PRG ENABLED OUTPUT A AND B
- PRG 2GC DELAY TMR: 13 SEC.
- PRG TIME
- PRG GATE RISING BEL: OFF
- PRG DATE
- PRG 2GC / I7 MODE NORMAL
- PRG DAYLIGHT SAVING: ENABLED
- PRG MIN ACTIVATE TMR: 25 SEC.
- PRG PASSWORD: DISABLED
- PRG INPUT 4, 5, 6 DISABLED

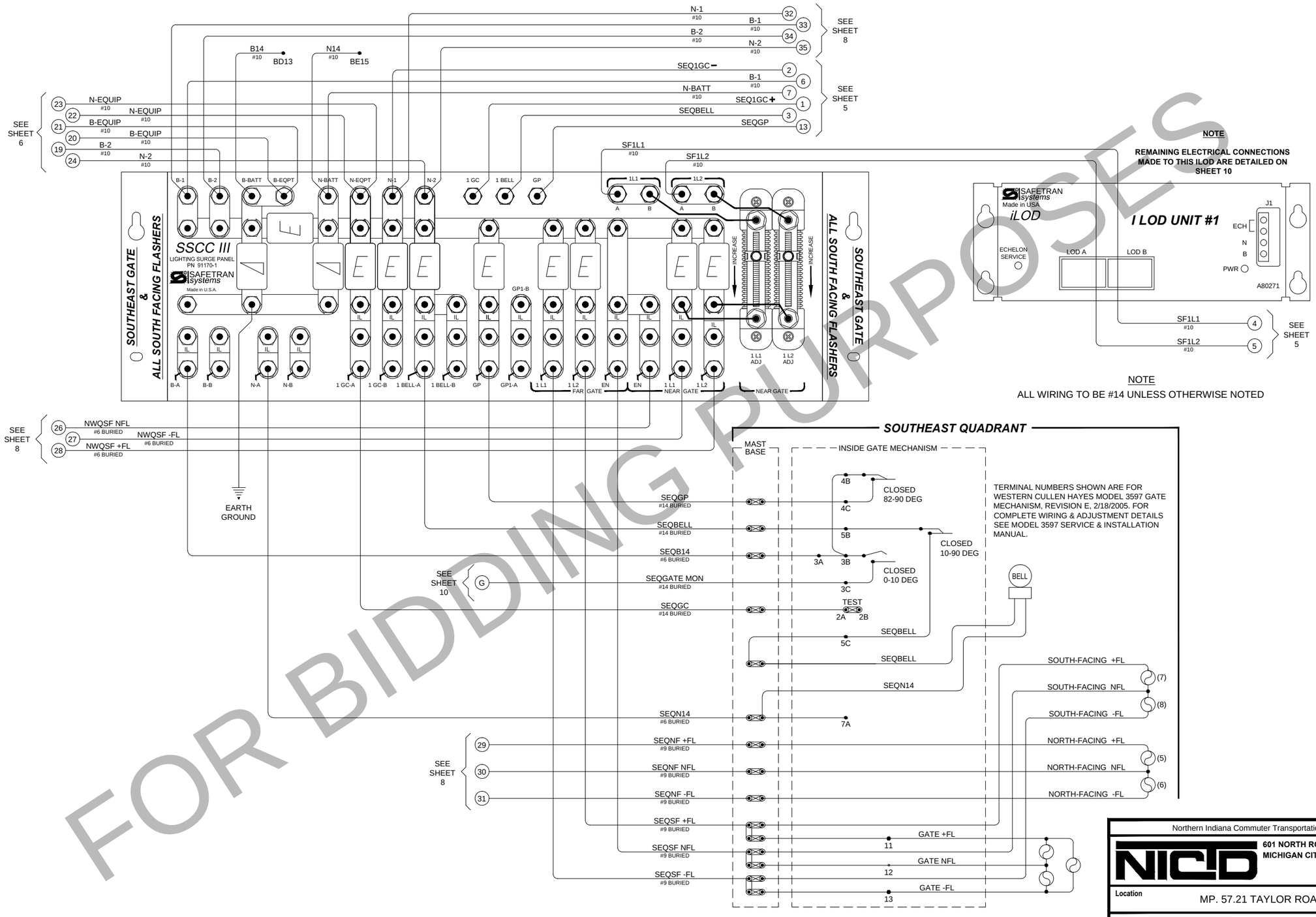
NOTE
ALL WIRING TO BE #14 UNLESS OTHERWISE NOTED

FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD
601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	CONTROLLER - NORTHWEST GATE & ALL NORTH FACING FLASHERS		
Designed By	DCJ	Document Number	SS05721.06
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	6 of 21



FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

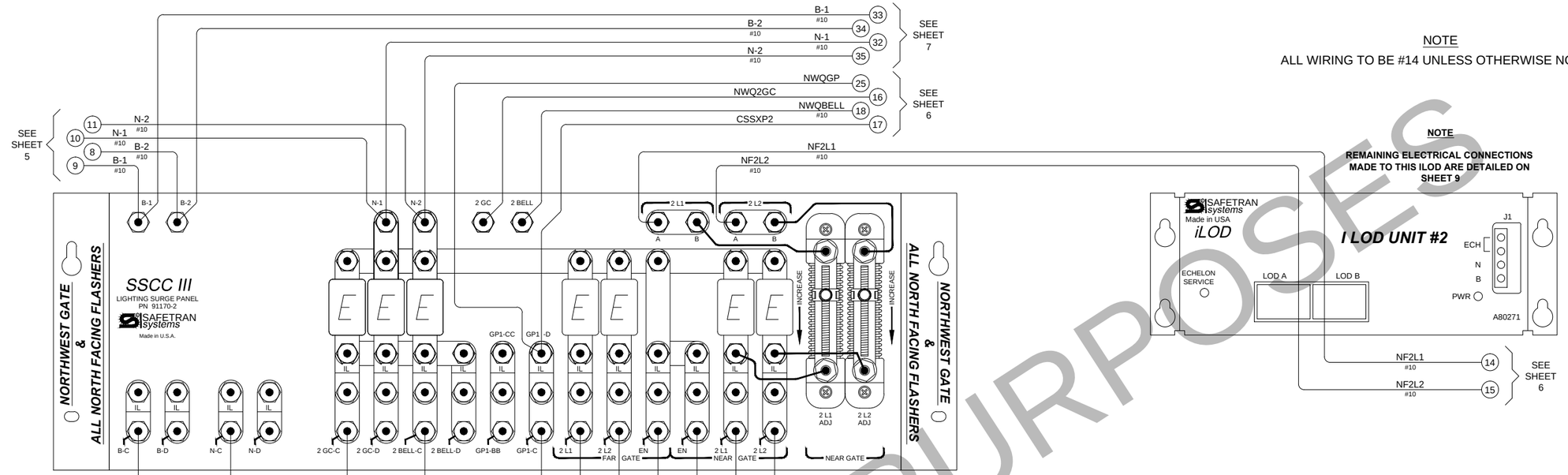
Location	MP. 57.21 TAYLOR ROAD		
Description	SURGE PANEL - SE GATE & ALL SOUTH FACING FLASHERS		
Designed By	DCJ	Document Number	SS05721.07
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	7 of 21

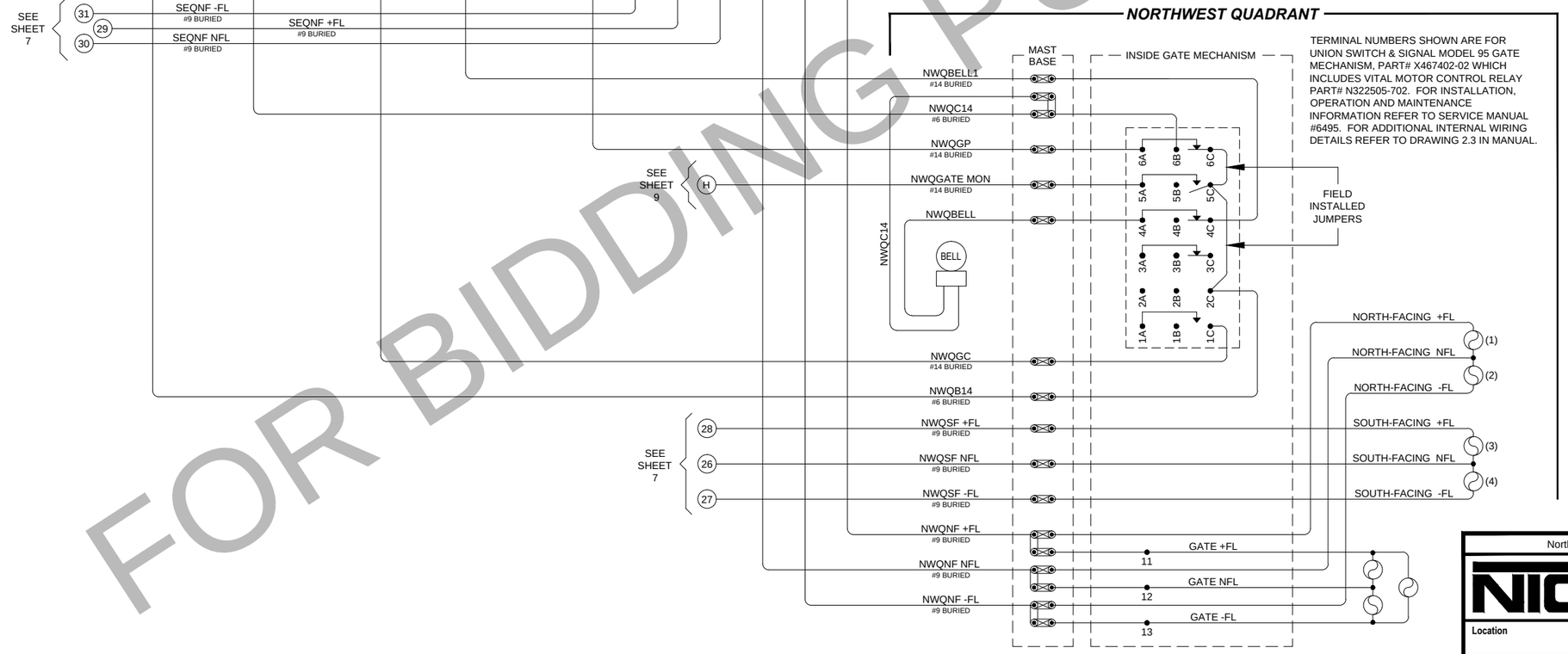
NOTE

ALL WIRING TO BE #14 UNLESS OTHERWISE NOTED

NOTE

REMAINING ELECTRICAL CONNECTIONS MADE TO THIS ILOD ARE DETAILED ON SHEET 9





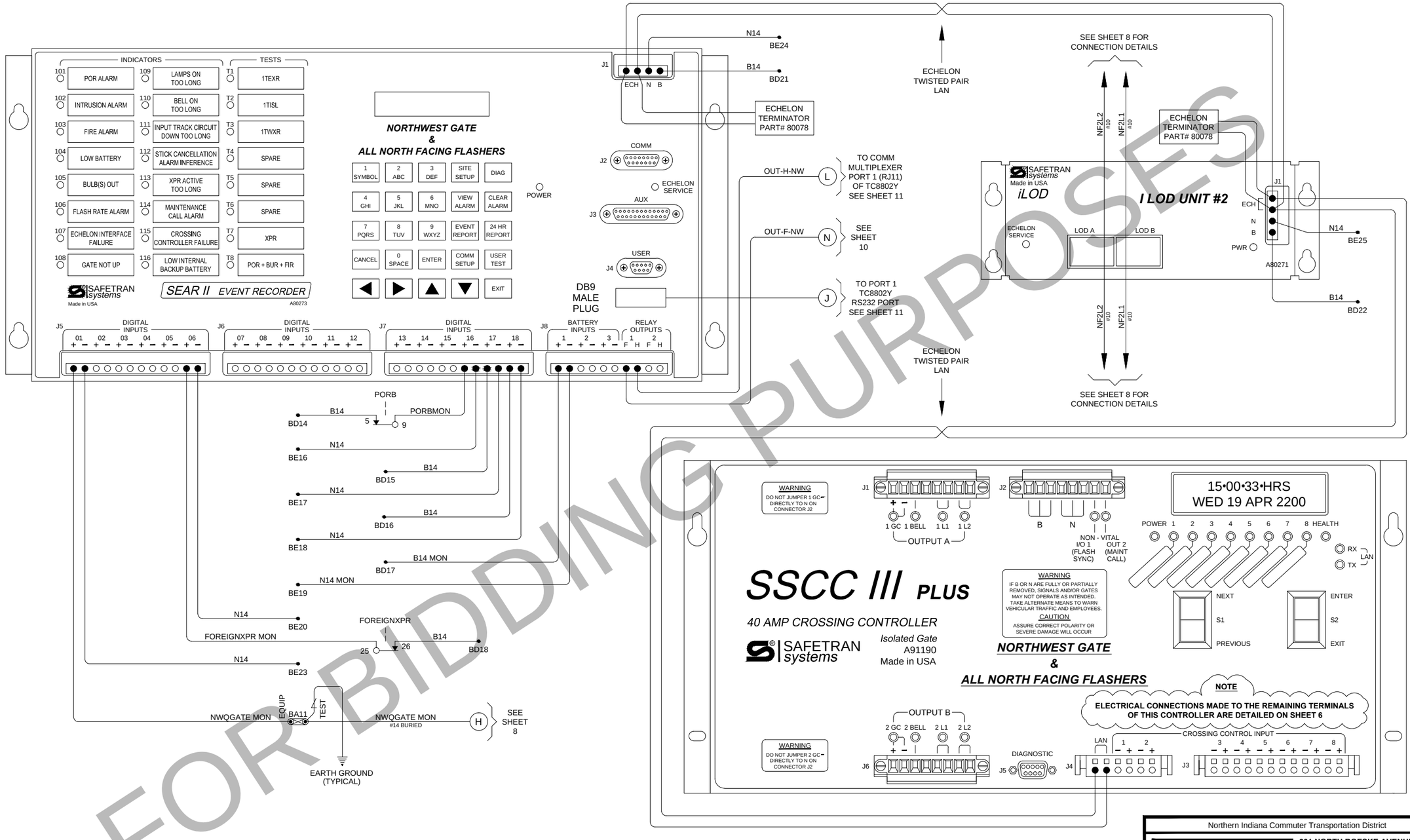
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	SURGE PANEL - NW GATE & ALL NORTH FACING FLASHERS		
Designed By	DCJ	Document Number	SS05721.08
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	8 of 21



NOTE

ALL WIRING TO BE #14 UNLESS OTHERWISE NOTED

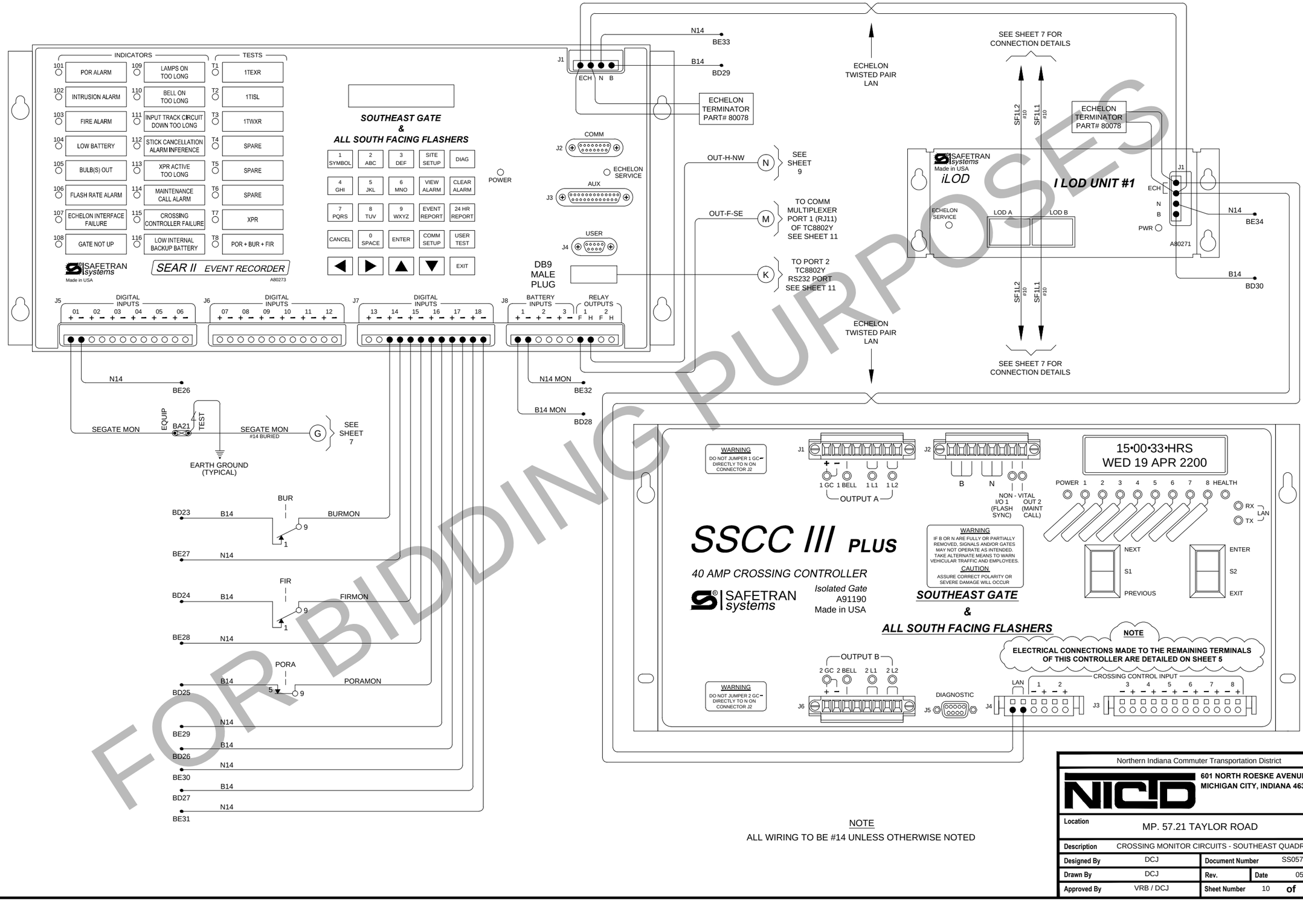
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	CROSSING MONITOR CIRCUITS - NORTHWEST QUADRANT		
Designed By	DCJ	Document Number	SS05721.09
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	9 of 21



NOTE

ALL WIRING TO BE #14 UNLESS OTHERWISE NOTED

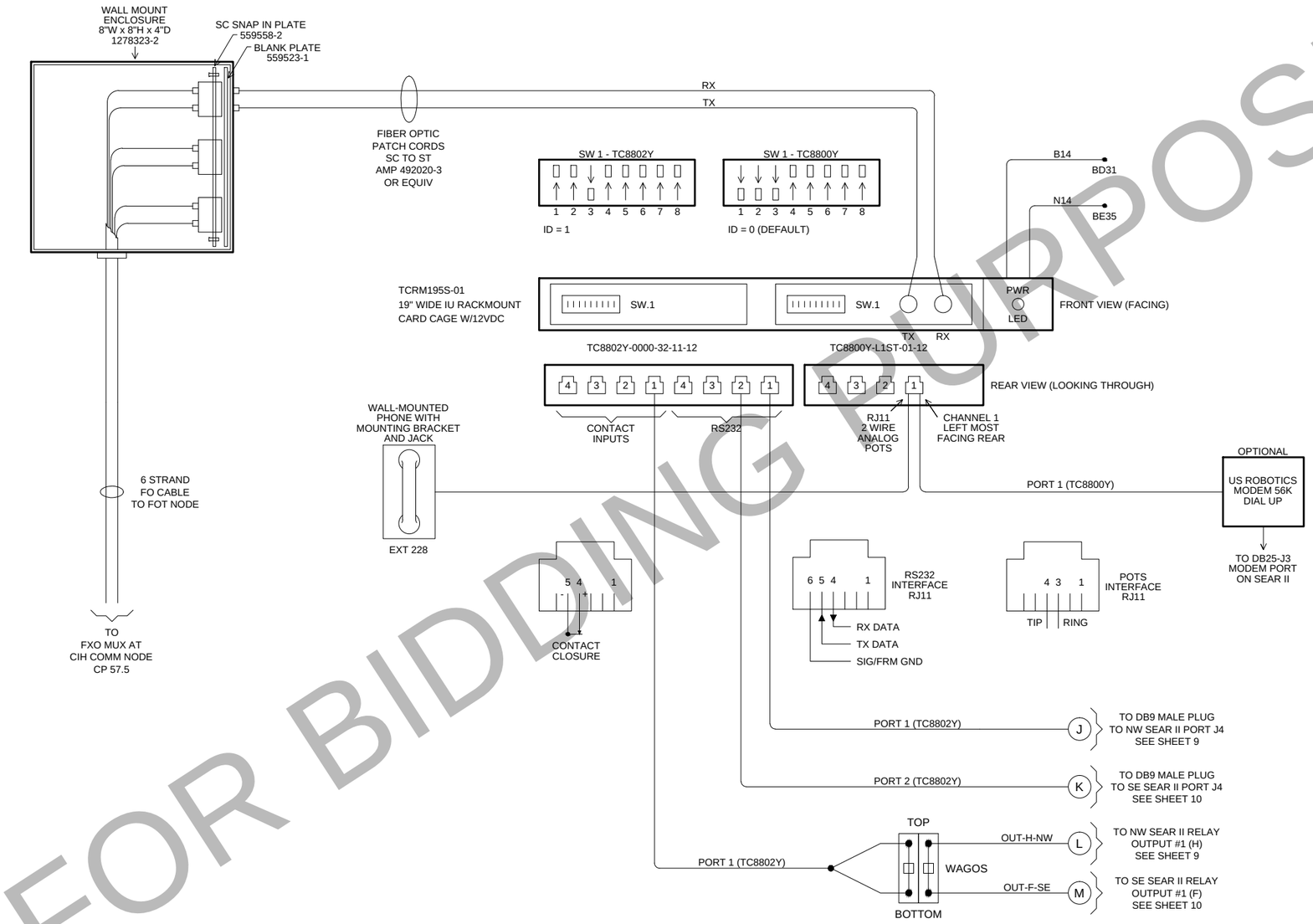
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	CROSSING MONITOR CIRCUITS - SOUTHEAST QUADRANT		
Designed By	DCJ	Document Number	SS05721.10
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	10 of 21



SWITCHES SLIDE DOWN TO TURN "ON"

TC8800Y	DIP SW1 SETTING
#1 ON	DISABLE CHAN 2
#2 ON	DISABLE CHAN 3
#3 ON	DISABLE CHAN 4
#4 OFF	DISABLE ALARM
#5 OFF	RING TEST - TEST ONLY
#6 OFF	SIGNAL GENERATOR
#7 OFF	RING CAD
#8 OFF	MASTER

SWITCHES SLIDE DOWN TO TURN "ON"

TC8802Y	DIP SW1 SETTING
#1 OFF	MSB ID
#2 OFF	2nd BIT ID
#3 ON	LSB ID=001
#4 OFF	ALARM DISABLE
#5 OFF	TO RS485 - NOT APP
#6 OFF	SIGNAL GEN - NOT APP
#7 OFF	REMOTE LOOP - TEST ONLY
#8 OFF	LOOP - TEST ONLY

NOTE

ALL WIRING TO BE #14 UNLESS OTHERWISE NOTED

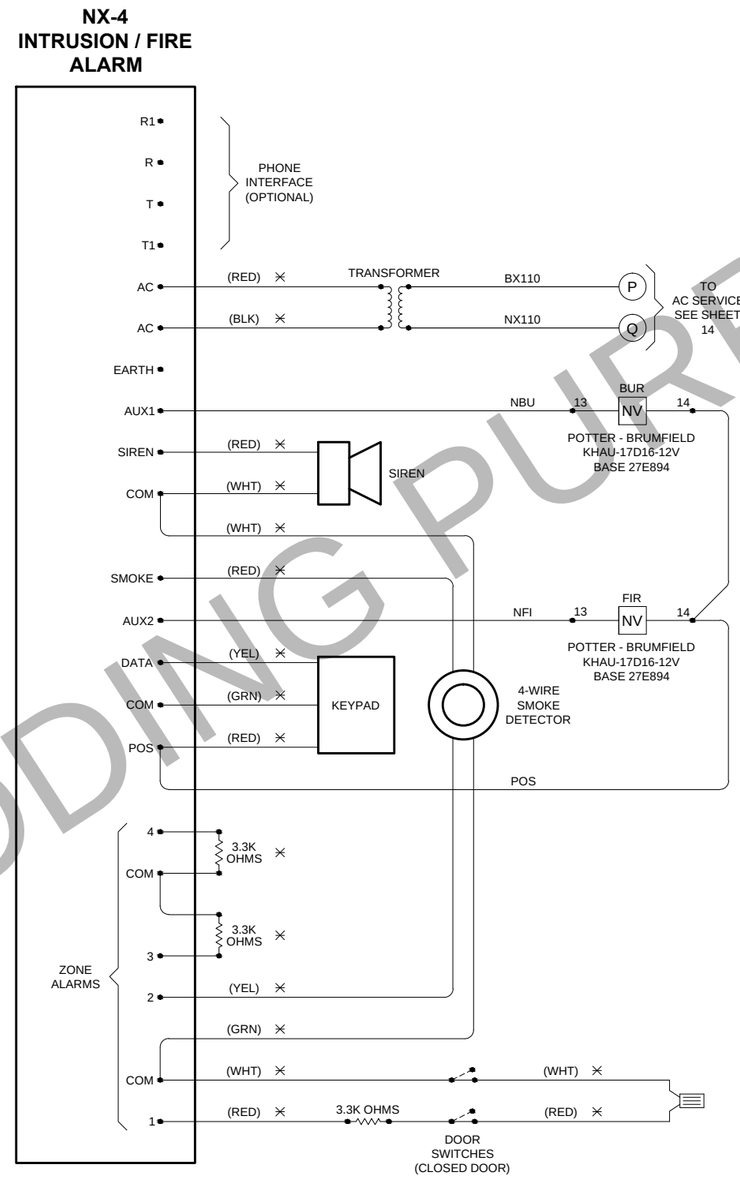
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD			
Description	COMMUNICATIONS INTERFACE			
Designed By	DCJ	Document Number	SS05721.11	
Drawn By	DCJ	Rev.	Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	11 of	21



⨯ PRE WIRED BY PTMW

* SIGNAL HOUSE SHALL BE PER PTMW

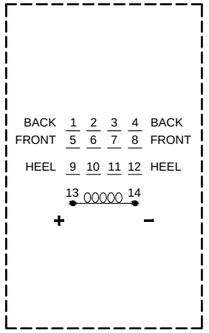
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD
601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

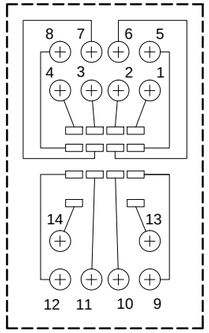
Location	MP. 57.21 TAYLOR ROAD		
Description	HOUSE ALARM		
Designed By	DCJ	Document Number	SS05721.12
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	12 of 21

POTTER BRUMFIELD
KHAU TYPE
NON VITAL RELAY



PIN VIEW

27E894
RELAY BASE
TERMINAL LOCATION



TOP VIEW

BUR

POTTER - BRUMFIELD KHAU-17D16-12V

CIRCUIT NAME	CONTACT NUMBER	CONTACT POSITION	TERMINAL NUMBER
BURMON	1	HEEL	9
	1	FRONT	5
B14	1	BACK	1
	2	HEEL	10
	2	FRONT	6
	2	BACK	2
	3	HEEL	11
	3	FRONT	7
	3	BACK	3
	4	HEEL	12
	4	FRONT	8
	4	BACK	4

FIR

POTTER - BRUMFIELD KHAU-17D16-12V

CIRCUIT NAME	CONTACT NUMBER	CONTACT POSITION	TERMINAL NUMBER
FIRMON	1	HEEL	9
	1	FRONT	5
B14	1	BACK	1
	2	HEEL	10
	2	FRONT	6
	2	BACK	2
	3	HEEL	11
	3	FRONT	7
	3	BACK	3
	4	HEEL	12
	4	FRONT	8
	4	BACK	4

PORA

POTTER - BRUMFIELD KHAU-17A16-120V

CIRCUIT NAME	CONTACT NUMBER	CONTACT POSITION	TERMINAL NUMBER
PORAMON	1	HEEL	9
B14	1	FRONT	5
	1	BACK	1
	2	HEEL	10
	2	FRONT	6
	2	BACK	2
	3	HEEL	11
	3	FRONT	7
	3	BACK	3
	4	HEEL	12
	4	FRONT	8
	4	BACK	4

PORB

POTTER - BRUMFIELD KHAU-17A16-120V

CIRCUIT NAME	CONTACT NUMBER	CONTACT POSITION	TERMINAL NUMBER
PORBMON	1	HEEL	9
B14	1	FRONT	5
	1	BACK	1
	2	HEEL	10
	2	FRONT	6
	2	BACK	2
	3	HEEL	11
	3	FRONT	7
	3	BACK	3
	4	HEEL	12
	4	FRONT	8
	4	BACK	4

NICTDXR

SAFETRAN 400000

CIRCUIT NAME	CONTACT NUMBER	CONTACT POSITION	TERMINAL NUMBER
XINGCNTRLP1	1	HEEL	12
B14	1	FRONT	13
	1	BACK	11
INDOT2	2	HEEL	15
INDOT1	2	FRONT	16
INDOTSUPVA	2	BACK	14
NINDOT2	3	HEEL	22
NINDOT1	3	FRONT	23
NINDOTSUPVA	3	BACK	21
CSSXP1	4	HEEL	25
CSSXP2	4	FRONT	26
	4	BACK	24
NCSSXP1	5	HEEL	32
C14	5	FRONT	33
	5	BACK	31
	6	HEEL	35
	6	FRONT	36
	6	BACK	34

NGCR

SAFETRAN 400020

CIRCUIT NAME	CONTACT NUMBER	CONTACT POSITION	TERMINAL NUMBER
NGCP	1	HEEL	12
B14	1	FRONT	13
	1	BACK	11
NF2L1	2	HEEL	15
	2	FRONT	16
NF2L1 (A)	2	BACK	14
NF2L2	3	HEEL	22
	3	FRONT	
NF2L2 (A)	3	BACK	21
	4	HEEL	25
	4	FRONT	26
	4	BACK	
	5	HEEL	32
	5	FRONT	33
	5	BACK	31
	6	HEEL	35
	6	FRONT	36
	6	BACK	34
	7	HEEL	23
	7	FRONT	24
	7	BACK	

NGCPR

SAFETRAN 400200

CIRCUIT NAME	CONTACT NUMBER	CONTACT POSITION	TERMINAL NUMBER
NWQ2GC	1	HEEL	12
B14	1	FRONT	13
	1	BACK	11
CSSXP	2	HEEL	15
CSSXP1	2	FRONT	16
	2	BACK	14
	X	HEEL	
	X	FRONT	
	X	BACK	
	X	HEEL	
	X	FRONT	
	X	BACK	
NCSSXP	5	HEEL	32
NCSSXP1	5	FRONT	33
	5	BACK	31
	6	HEEL	35
	6	FRONT	36
	6	BACK	34

FOREIGNXPR

SAFETRAN 400000

CIRCUIT NAME	CONTACT NUMBER	CONTACT POSITION	TERMINAL NUMBER
XINGCNTRLP	1	HEEL	12
XINGCNTRLP1	1	FRONT	13
	1	BACK	11
INDOT1	2	HEEL	15
INDOT	2	FRONT	16
INDOTSUPV	2	BACK	14
NINDOT1	3	HEEL	22
NINDOT	3	FRONT	23
NINDOTSUPV	3	BACK	21
FOREIGNXPRMON	4	HEEL	25
B14	4	FRONT	26
	4	BACK	24
	5	HEEL	32
	5	FRONT	33
	5	BACK	31
	6	HEEL	35
	6	FRONT	36
	6	BACK	34

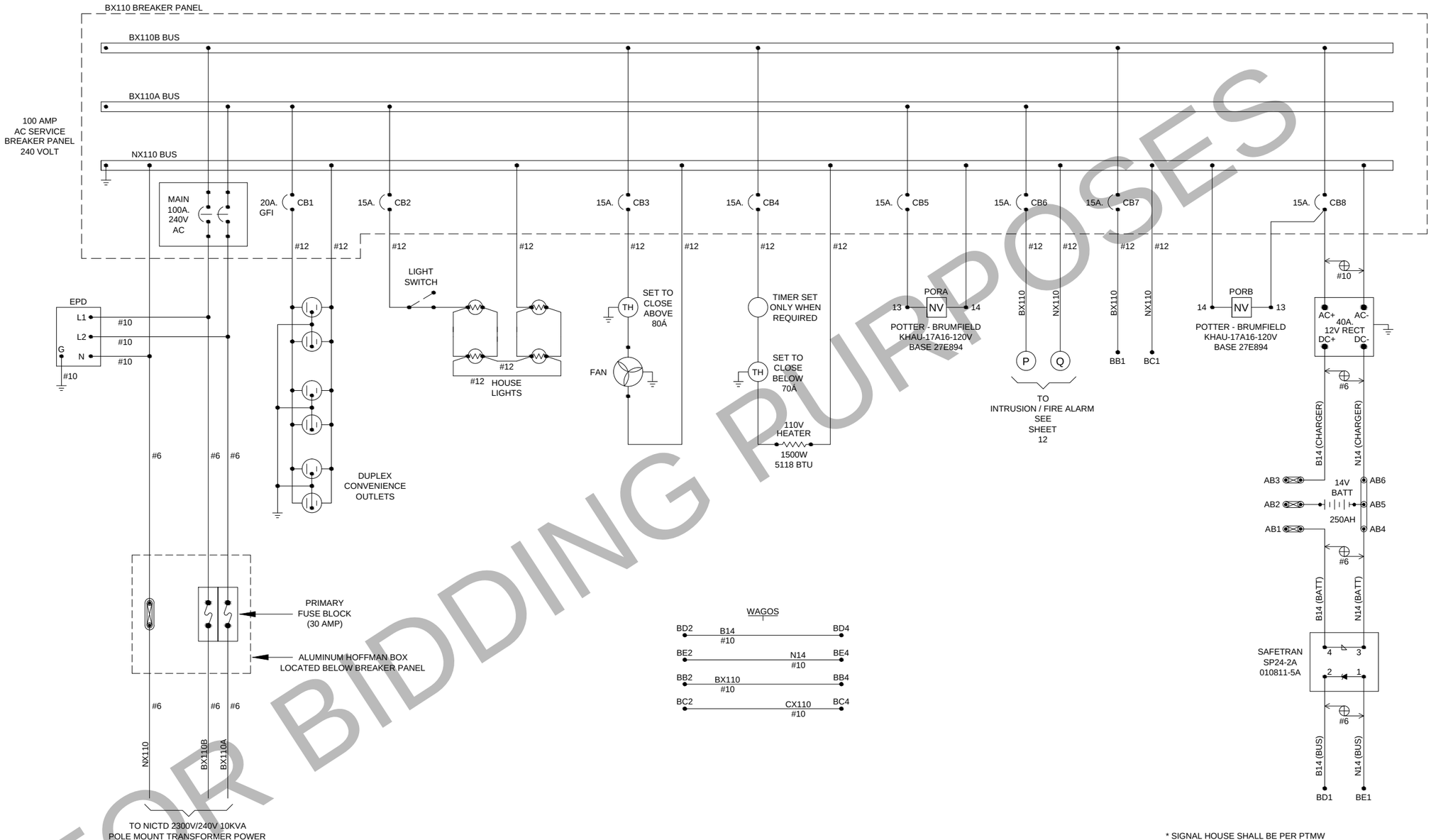
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	RELAY CONTACT ASSIGNMENTS		
Designed By	DCJ	Document Number	SS05721.13
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	13 of 21



FOR BIDDING PURPOSES

* SIGNAL HOUSE SHALL BE PER PTMW

NOTES:

1. BREAKER TO BE SQUARE D, QO TYPE
2. PRIMARY FUSES ARE BUSSMANN FNR-R TYPE
3. PRIMARY FUSE HOLDERS ARE WESTERN-CULLEN #2305-12
4. PRIMARY PROTECTION DEVICE TO BE MODEL EPD 120 / 240TDFL.
5. ALL WIRING TO BE #14 UNLESS OTHERWISE NOTED.

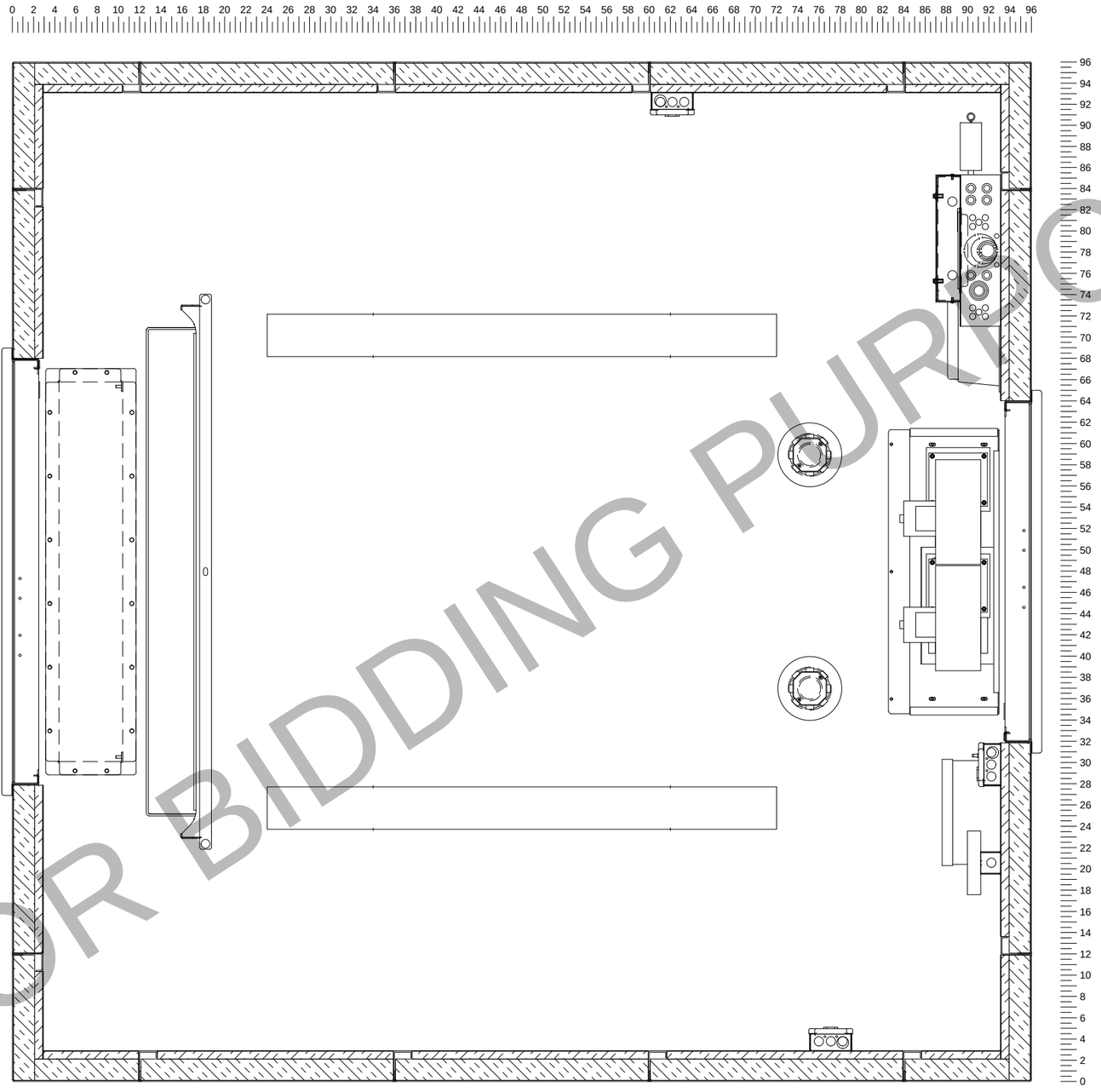
Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD				
Description	POWER DISTRIBUTION				
Designed By	DCJ	**Document Number**	SS05721.14		
Drawn By	DCJ	**Rev.**	**Date**	05-04-15	
Approved By	VRB / DCJ	**Sheet Number**	14	**of**	21

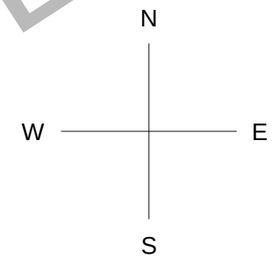
"C" WALL



"B" WALL

"D" WALL

"A" WALL



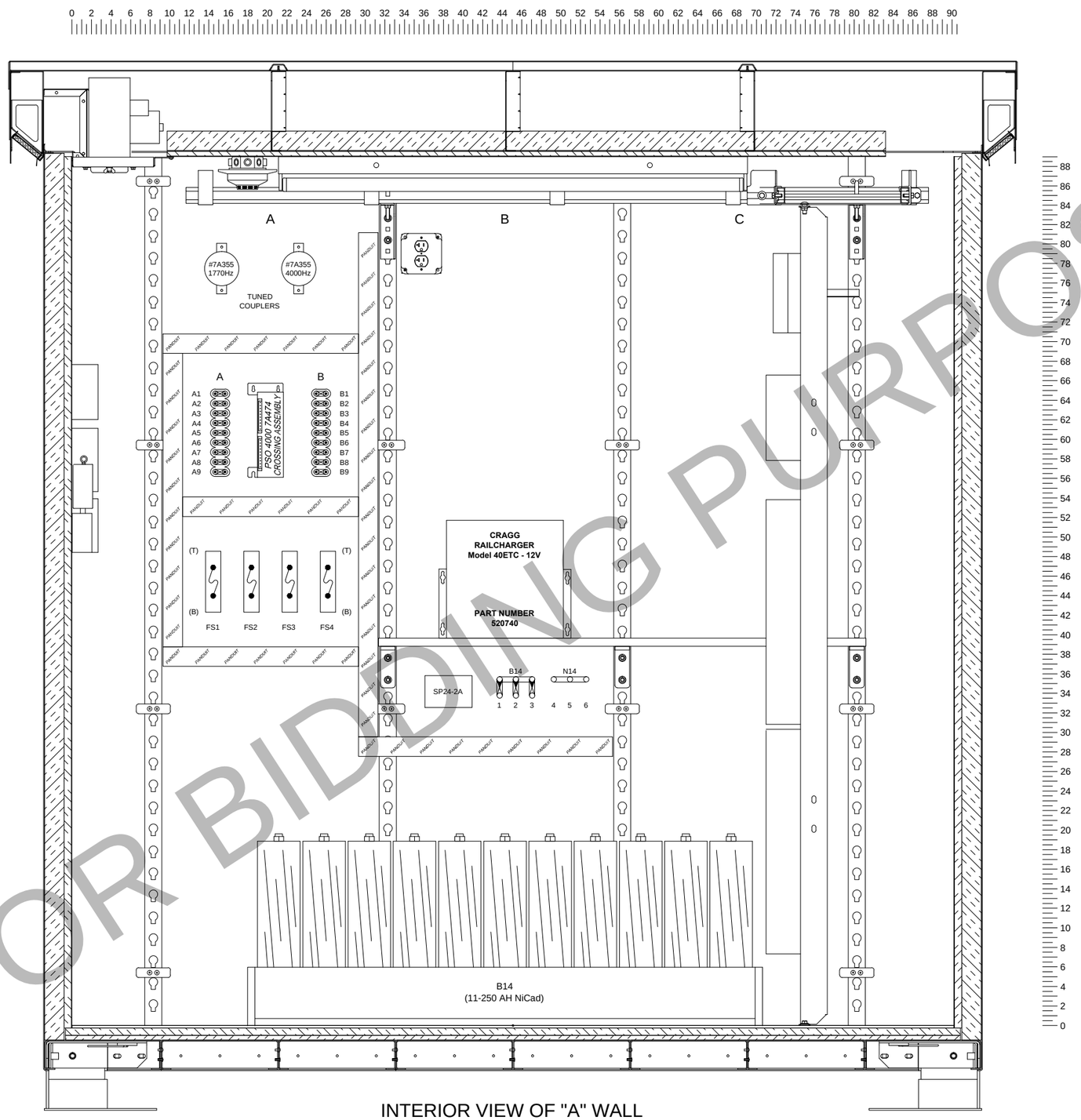
FOR BIDDING PURPOSES

* SIGNAL HOUSE SHALL BE PER PTMW

Northern Indiana Commuter Transportation District

NICTD
601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	OVERHEAD HOUSE LAYOUT		
Designed By	DCJ	Document Number	SS05721.15
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	15 of 21

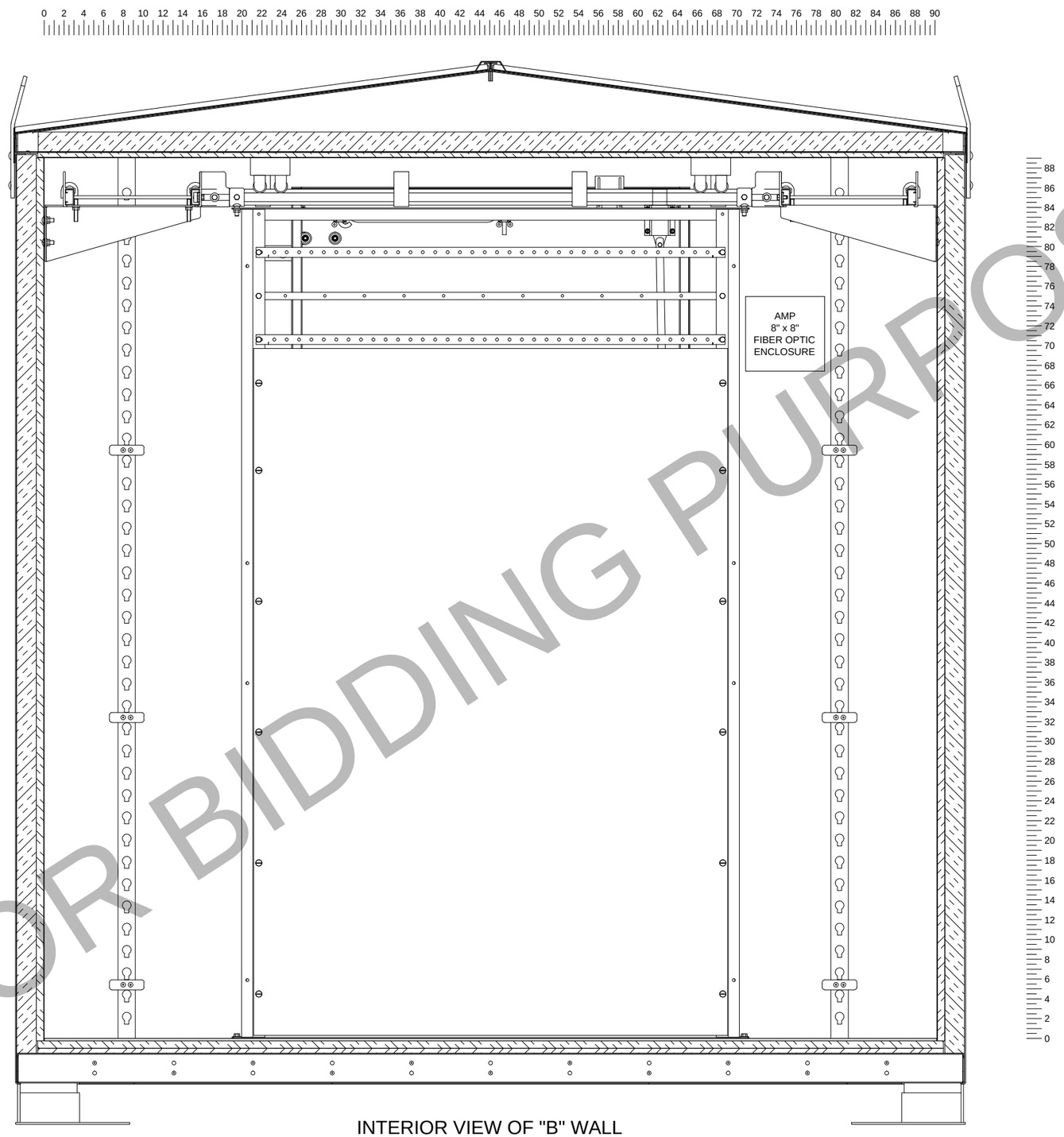


INTERIOR VIEW OF "A" WALL

* SIGNAL HOUSE SHALL BE PER PTMW

FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District				
NICTD 601 NORTH ROESKE AVENUE MICHIGAN CITY, INDIANA 46360-2669				
Location	MP. 57.21 TAYLOR ROAD			
Description	INTERIOR HOUSE LAYOUT - "A" WALL			
Designed By	DCJ	Document Number	SS05721.16	
Drawn By	DCJ	Rev.	Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	16 of 21	



INTERIOR VIEW OF "B" WALL

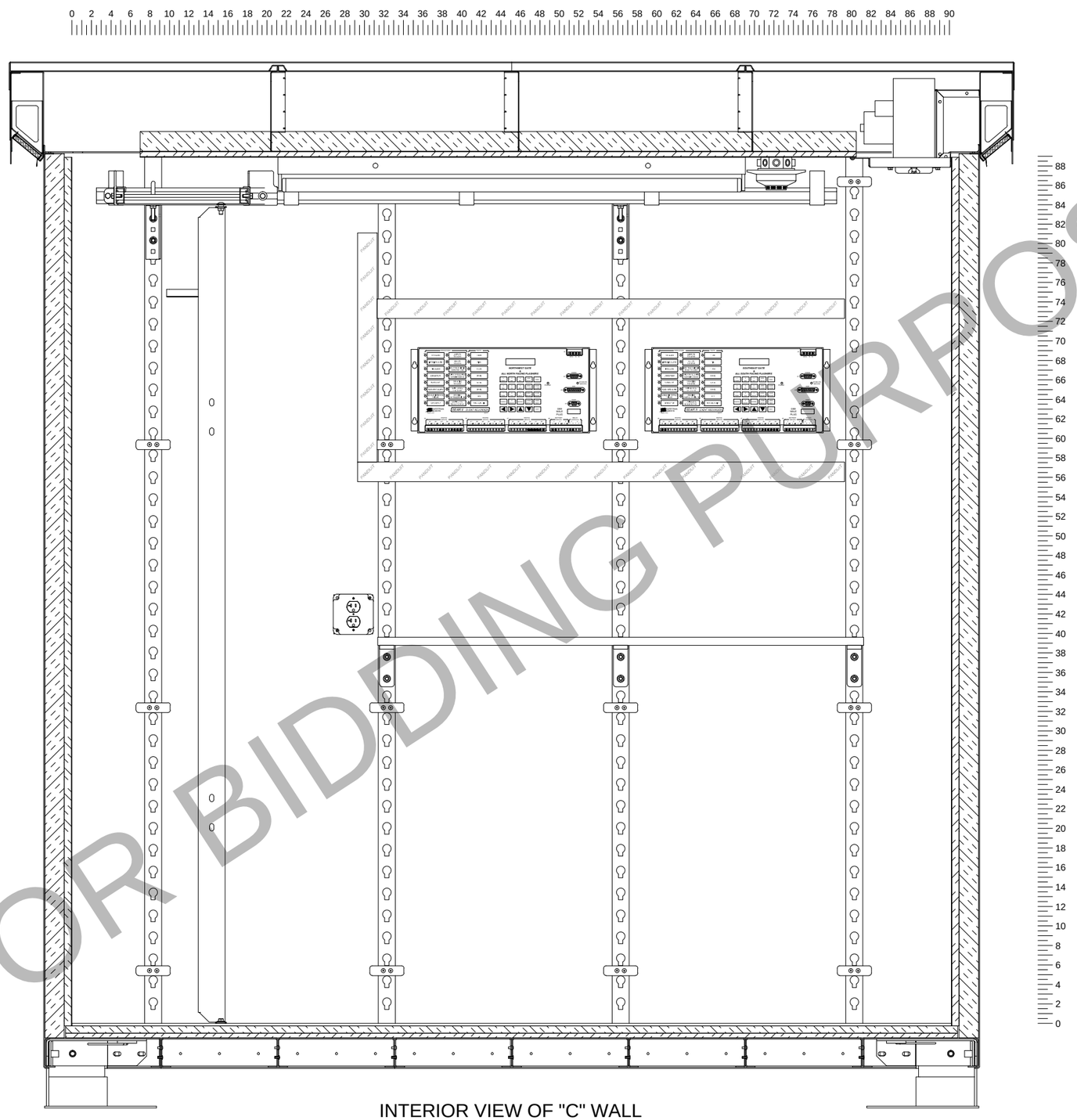
* SIGNAL HOUSE SHALL BE PER PTMW

FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD
601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	INTERIOR HOUSE LAYOUT - "B" WALL		
Designed By	DCJ	Document Number	SS05721.17
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	17 of 21



INTERIOR VIEW OF "C" WALL

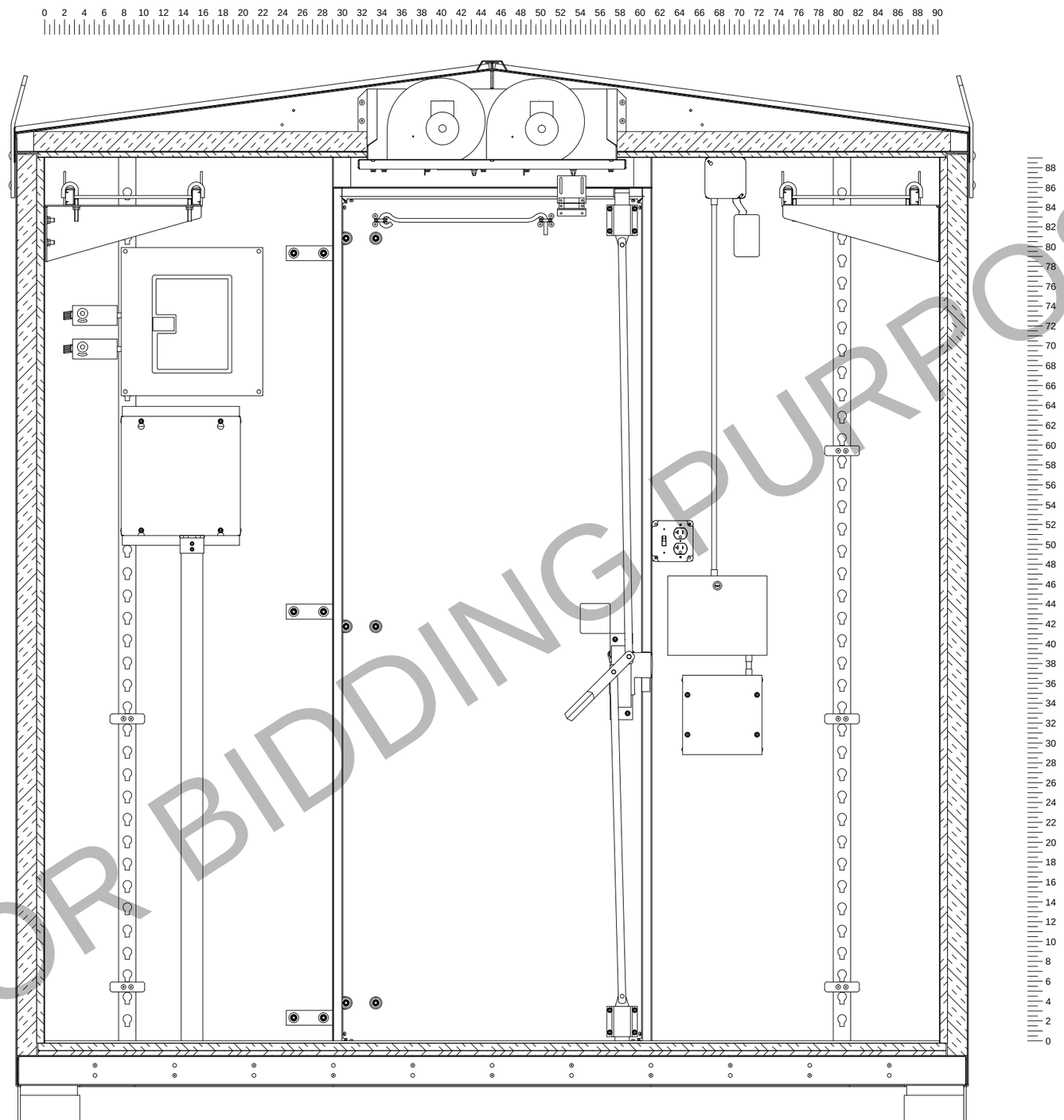
* SIGNAL HOUSE SHALL BE PER PTMW

FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD
601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD			
Description	INTERIOR HOUSE LAYOUT - "C" WALL			
Designed By	DCJ	Document Number	SS05721.18	
Drawn By	DCJ	Rev.	Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	18 of	21



INTERIOR VIEW OF "D" WALL

* SIGNAL HOUSE SHALL BE PER PTMW

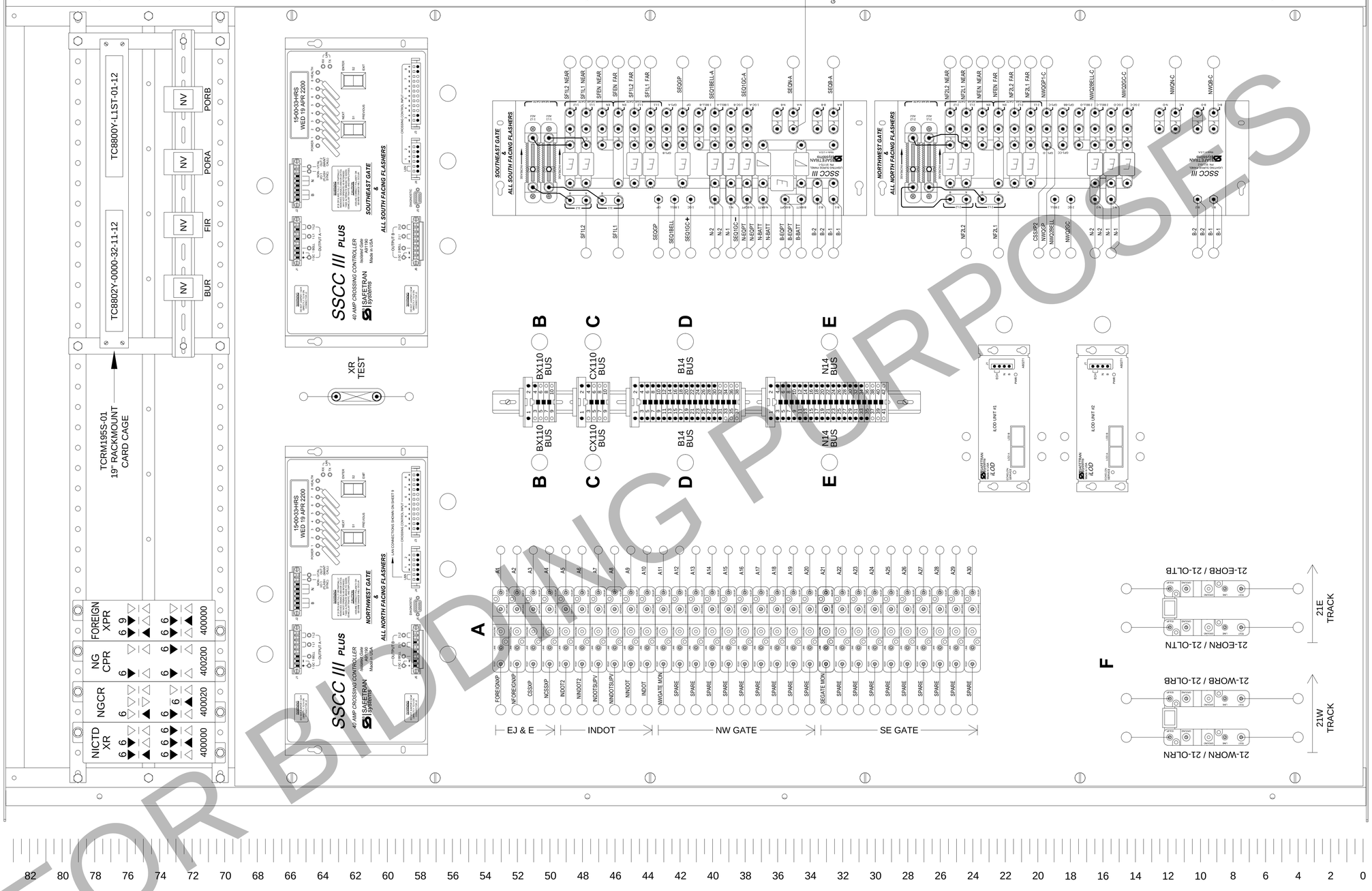
FOR BIDDING PURPOSES

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD			
Description	INTERIOR HOUSE LAYOUT - "D" WALL			
Designed By	DCJ	Document Number	SS05721.19	
Drawn By	DCJ	Rev.	Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	19 of	21



FOR BIDDING PURPOSES

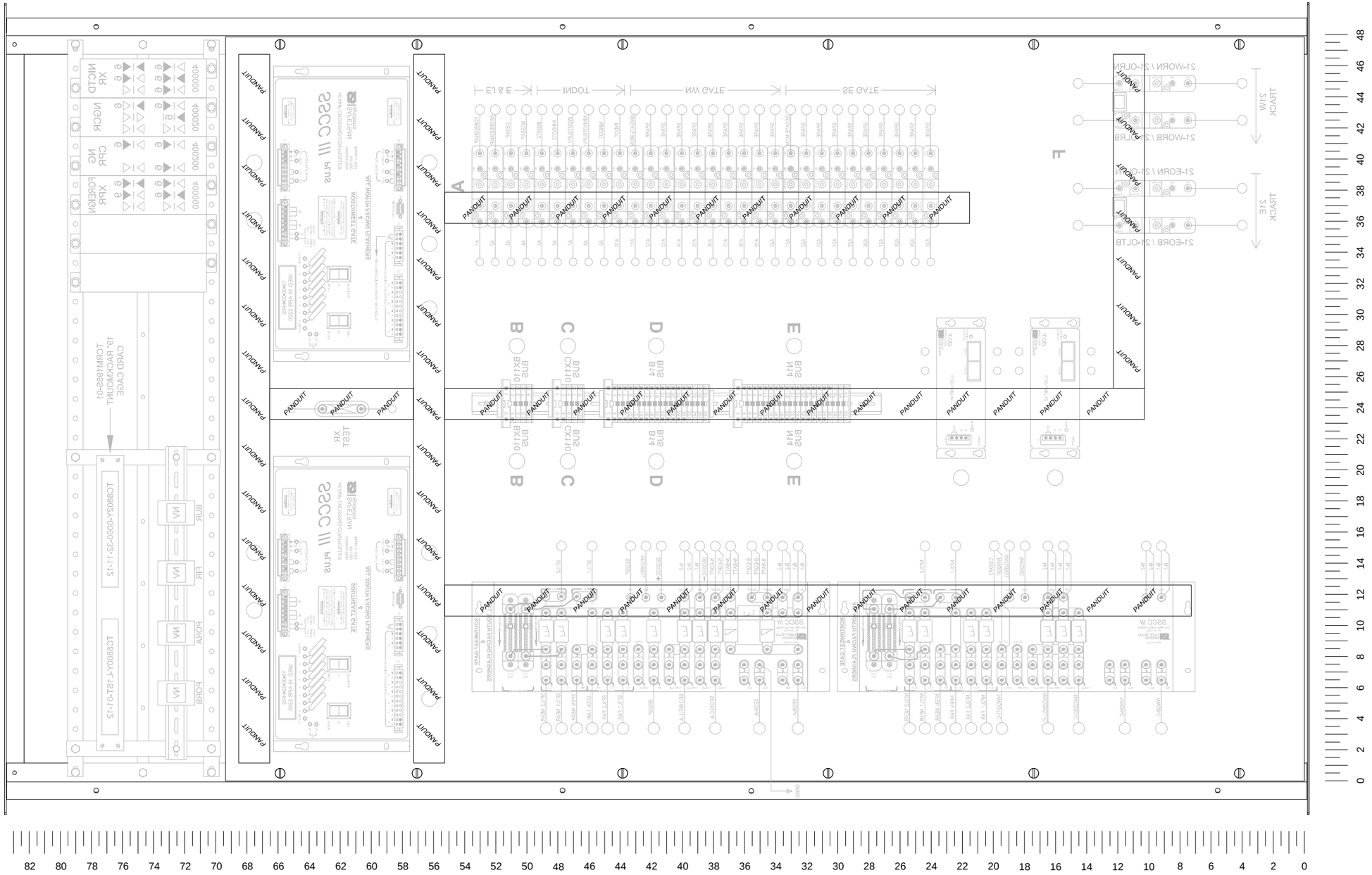
HOUSE APPARATUS BOARD "B" FRONT VIEW

* SIGNAL HOUSE SHALL BE PER PTMW

Northern Indiana Commuter Transportation District

NICTD
601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD			
Description	HOUSE APPARATUS BOARD "B" FRONT VIEW			
Designed By	DCJ	Document Number	SS05721.20	
Drawn By	DCJ	Rev.	Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	20 of	21



FOR BIDDING PURPOSES

HOUSE APPARATUS BOARD "B" FRONT VIEW

* SIGNAL HOUSE SHALL BE PER PTMW

Northern Indiana Commuter Transportation District

NICTD

601 NORTH ROESKE AVENUE
MICHIGAN CITY, INDIANA 46360-2669

Location	MP. 57.21 TAYLOR ROAD		
Description	HOUSE APPARATUS BOARD "B" REAR VIEW		
Designed By	DCJ	Document Number	SS05721.21
Drawn By	DCJ	Rev. / Date	05-04-15
Approved By	VRB / DCJ	Sheet Number	21 of 21